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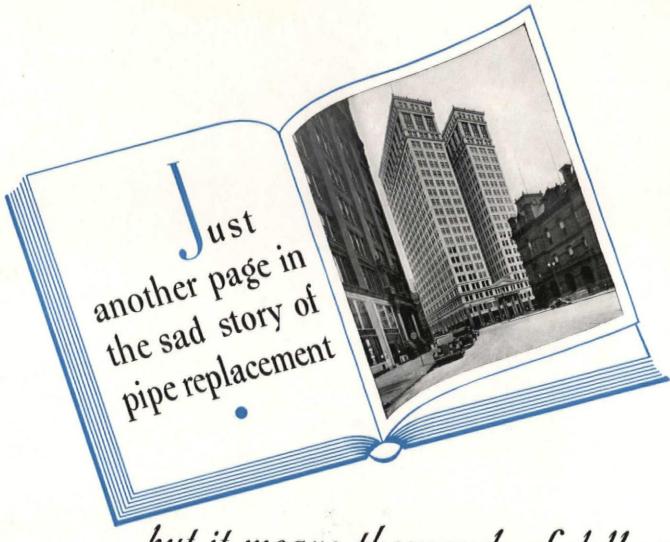
# ARCHITECTURAL

# FORUM

SKYLINE OF 1936

OCTOBER, 1936

RESIDENTIAL ... COMMERCIAL ... INDUSTRIAL INSTITUTIONAL ... RECREATIONAL ... PUBLIC



# but it means thousands of dollars

# Republic Steel CORPORATION GENERAL OFFICES...CLEVELAND, OHIO

The pipe used for water lines and steam returns in this large Detroit office building failed. Some of it already has been torn out and new pipe installed. Eventually, all of it must be replaced at a cost of thousands of dollars for labor and new materials.

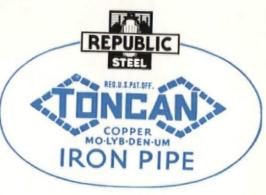
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### OCTOBER

This year, for the first year in five, the U.S. skyline really got further than paper. America is again building to house its industries, to provide its merchants with new places of business, to supply its people with more centers of amusement, to facilitate its system of education, to accommodate its public gatherings, to take care of its expanding Government, to keep its sick and aged, and to give shelter to the mass of its citizens. From this horizon of activity, THE ARCHITECTURAL FORUM selects significant examples of contemporary architecture, notes trends, records statistics, and reviews events to present:

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Editor, Howard Myers; Managing Editor, Ruth Goodhue; Associates, George Nelson, A. C. Shire, Cameron Mackenzie, Paul Grotz, Madelaine Kroll.

Grotz, Madelaine Kroll.

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VOLUME 65—NUMBER FOUR

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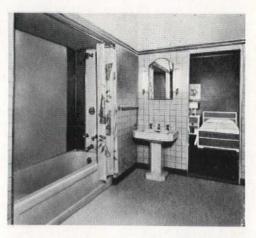
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### THE YEAR IN BUILDING

VOLUME. F. W. Dodge figures on total actual construction in the 37 States East of the Rockies for August showed a slump from \$295 millions in July to \$275 millions in August, but the decline was less than seasonal: August, 1936, was \$106 millions ahead of the same month a year ago. To the sharp contraseasonal rise of residential building could be attributed August's volume record, from \$72 millions in July to \$101 millions in August. This rise was not unexpected, however, and resulted from a special condition. Foreshadowed by the unparalleled rise in New York City building permits filed two months ago, it was due to the efforts of builders to escape the stringent requirements of the proposed new building code.

For August, New York City's \$12,000,000 worth of permits continued to dominate the U. S. scene, small houses continuing to sprout in Queens, new apartment buildings continuing to spike up in Brooklyn and the Bronx. Los Angeles remained in second place behind New York, with Detroit, a city which is now rounding out a campaign patterned on that which gave Los Angeles over \$100 millions of new construction in fourteen months (Arch. Forum, Sept. 1936, p. 244), following along in third.

For the first eight months of 1936, building construction totted up to \$1,799,700,-000. This represented a 76 per cent increase over the \$1,024,430,000 total for the first eight months of 1935. The figures look extremely encouraging; but they do not yet add up to any sort of a boom. The eight months' figure for 1936 is still only some 25 per cent of the corresponding figure for 1928 (see chart).

But if the year has given us no boom, it has still provided any number of symptoms to indicate that the current activity is healthy and also prophetic. Perhaps the most dramatic fact developed is that a 20 per cent down payment will now actually secure a house in a great many parts of the country, a condition which the long-minded will remember as still in the conversational stage this time last year.

Other common indicators show the character of realty undergoing some change, as it passes from a buyer's to a seller's market. Interest rates have declined fractionally over the last year (as predicted in The Forum survey of April, 1936), so that the semiannual survey of the National Association of Real Estate Boards reports 6 per cent as the average, with 5½ per cent becoming much more common, and 5 per cent becoming widely used in the West North Central section.

Rents have appreciated steadily in the large urban centers, averaging about an 8 per cent increase. Building materials, on the other hand, have advanced only microscopically, now standing at 86.7 per cent of the 1926 level, the highest since 1930, but only 1.6 points above the corresponding period last year. Feature of the material markets has been the greater than average increase in the prices of plumbing and heating equipment (66.8 per cent of 1926 to 76.5) and of structural steel (92 per cent of 1926 to 97.1).

But provided that all factors conspired to a favorable market, no activity can be expected to follow in the low-priced residential market unless and until a large number of people have amassed in their savings the price of a down payment—that \$1,000 which today represents that largest single obstacle in the road to home ownership of the \$5,000 house.

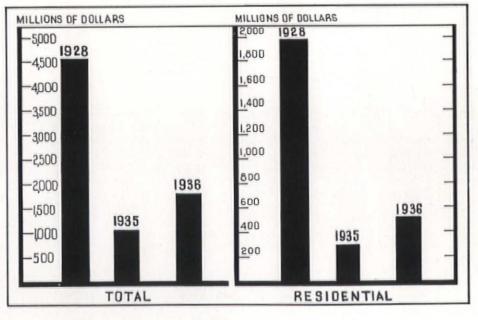
According to figures compiled by the National Industrial Conference Board, the average weekly earnings of all wage earners in the U.S. stood, in October, 1929, at the all-time high of \$29.22. In March, 1933, they had sunk to a low of \$14.53. The 1934 average was \$20.12; the 1935 average was \$22.38. As of July, 1936, the rate stood at \$24.23. That there was more money in the national pay check than there had been since 1930 was obvious; where it was all going was less obvious. First fact to be considered was that the cost of living was rising, was therefore eating further into the weekly wage. The National Industrial Conference Board figures placed the July cost of living index at 85.2 per cent of the 1923 average, or 2.6 points higher than the

same period last year. However, this rise is relative, not absolute; and it is impossible to say with any accuracy whether or not the national income is rising more slowly than, as fast as, or faster than the national cost of living.

A prime indication, however, has always been the sale of certain commodities which lie on the borderline of necessity, so that they become the first acquisitions of a family when its income rises. Of these commodities perhaps the most sensitive indicators are radios, refrigerators, and vacuum cleaners. The curve of refrigerator sales presents a remarkable phenomenon. From a volume of \$128 million in 1928, it rose steadily to \$236 million in 1931; in the following year it sank to \$146 million, thence to rise by slow steps to an all-time high of \$260 million in 1935. But during the first seven months of 1936, refrigerator sales have already topped the record total for the whole of 1935, stand at \$288 million. Radios, which are generally regarded as more of a luxury when bought first-hand, tell a similar story.

Net conclusion that can validly be drawn from these sales figures is that there definitely does exist a sizable increment after the national cost of living has been subtracted from the national income. The average size of this increment cannot of course be determined with exactitude from the sale of commodities like refrigerators or radios, which require but a 10 per cent down payment. But experience has shown that a rise in their sale generally means sizable accounts in the bank.

And the quarterly survey by Fortune, published this month, gives a hint as to



where Recovery dollars are liable to go. A breakdown of the answers given by 4,500 persons scientifically sampled by wealth, sex, age, geographical distribution, and walk of life shows that 30.7 per cent would use the increase in salary check for savings, insurance, debt, while 27.6 per cent plan for a new home, improvements, furniture, rent. More significant, 20.3 per cent, the largest category answering a specific question, would spend their increased income on a down payment for a new home. So, while commodities other than housing seem to be getting the lion's share of the new business made possible by this extra money today, every sign points to houses as the next item on the nation's shopping list. To merchandising, therefore, will fall the major burden of Building for 1937.

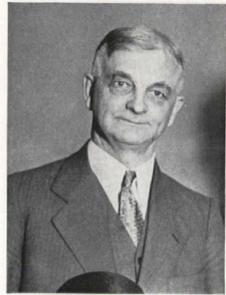
LABOR. That labor in building has been forever amorphous can be attributed almost 100 per cent to the fact that it is still constituted as it was during the days of the medieval guild. Nor has it ever permitted technological advances to loosen its grip on the many branches of its skilled workers. Prime symptom of this chaos has ever been the jurisdictional strike. Numerous have been the attempted methods of control set up, just as numerous are the corpses created by the jurisdictional strike. Last attempt, and least lamented by the industry, was the Board of Trade Claims, which lost all its power by such refusals as that of the mighty United Brotherhood of Carpenters & Joiners of America to abide by its decisions. Due to disputes it failed to settle peremptorily, the carpenters, the bricklayers, the electrical workers all at one time or another had resigned their affiliations with the American Federation of Labor. But last month well-wishers of the industry took heart. A different technique of control had been devised.

One Dr. John A. Lapp, soft-spoken Director of Labor Relations for the PWA, met with A. F. of L. officials, at last agreed to serve as virtual czar to the block of building unions and in that capacity to judge finally any jurisdictional dispute arising among the nineteen building unions affiliated with the A. F. of L. Such news was welcome to the industry as well for that single fact as for a concurrent announcement: no longer would construction work cease while the jurisdictional dispute was being settled.

According to the new plan, all jurisdictional strife will first go through a conference stage, in an attempt at settlement. Failing this, the dispute will be referred to Dr. Lapp, who probably realizes only too well the hardships ahead in hoeing this row. All crafts have agreed to abide by the decisions of the referee.

Dr. Lapp, whose title was won in the days when he taught sociology at Marquette University and by post-graduate degrees taken at Cornell and the University of Wisconsin, has had his share of labor mediation before. He organized the Chicago Regional Labor Board in 1933, took over the chairmanship of the Bituminous Coal Labor Board late that year, subsequently becoming a member of the Federal Petroleum Labor Policy Board. He will continue his work as Director of Labor Relations for the PWA. Washington observers feel that the fact he was offered the job by adherents of A. F. of L. President William Green is sufficient assurance that he sympathizes with that conciliatory figure against John L. Lewis and his rebel Committee for Industrial Organization.

He is a Green man in more ways than



Harris & Ewing

Referee Lapp

one. Like his new employer, he is more the mediator than the dictator. Furthermore, it is pointed out that he has actually never had an important decision to make on a labor dispute, may be regarded by his new employer as essentially safe, will rule for interests rather than principles. And, although the nineteen unions have agreed to abide by his decisions, the nineteen unions are notoriously loath to abide by any adverse decision. The proof of the Lapp pudding, and the proof of the latest attempt to smooth out the jurisdictional strike, will come when the first one of the nineteen has to eat an adverse Lapp decision.

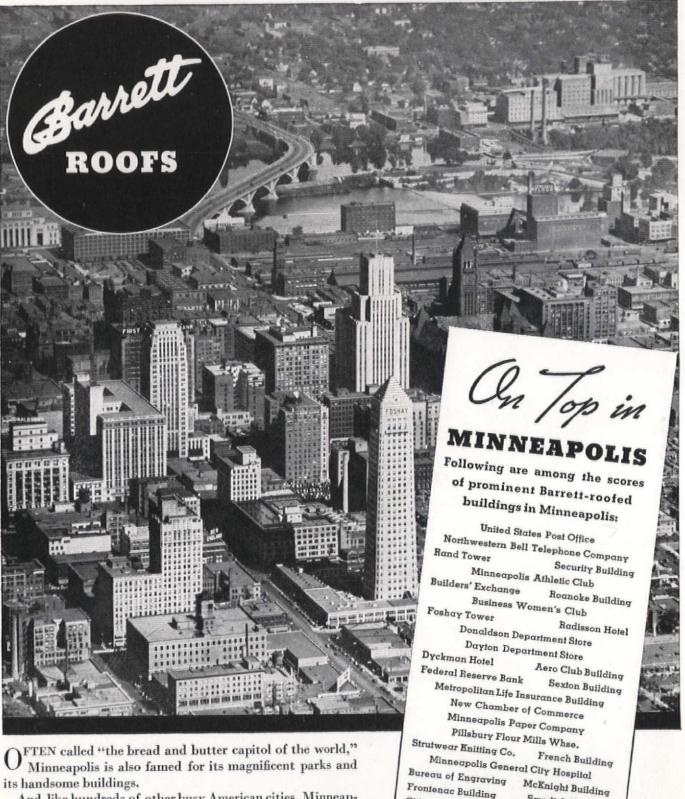
But this advance toward labor peace was a gesture on the surface. Beneath that surface, observers felt that even in the building unions, long recognized citadel for the horizontal union, sympathy was growing for John L. Lewis's Committee for Industrial Organization, that the time might well come when the building industry would be as vertically organized as any in the field of labor.

Reasons for this belief were, as of last month, still nebulous. There was, first, talk in Washington of the formation of what might be tentatively called a House Erectors' Union, which would vertically embrace the masons and bricklayers, the carpenters and steel workers, the lathers, electrical workers, painters, paperhangers, joiners, etc., from excavation work to roofing. But this was still only talk, and not even talk which had reached the people who might do the idea most good.

More definite a sign was the increased sympathy among workers for industrial organization. At present there is one vertical union in the Building Department of the A. F. of L.: hardboiled Frank Feeney's tight little International Union of Elevator Constructors, whose members like their president so much that they have given him a yacht. There are also "progressive" unions in the Building Department, most notable of which is the Brotherhood of Painters, Decorators, and Paperhangers of America, presided over by white-thatched Lawrence P. Lindelof, one of the old German Socialist group, who in 1922 succeeded in committing his union to the Farmer Labor Party. These are the only outward and visible-if tenuous-signs of sympathy for the vertical union.

Inward and spiritual, and imponderable, is the feeling that such workers as carpenters, from their frequent association with miners, grow to understand the virtues inherent in a closely knit organization. Their growing sympathies are with the one that fighting John L. Lewis has espoused on the front pages of the Press since his fisticuffs with towering A. F. of L. Vice-President William L. Hutcheson, head of 300,000 carpenters, at the Atlantic City convention last October. On that occasion, when Hutcheson referred to Lewis as a big bastard, the miner stretched the carpenter his length on the floor, nor is the carpenter likely to forget it quickly. Fighter Lewis shrewdly jockeyed his C. I. O. well into the public eye during the heat of a presidential year. He has pounded hard and successfully. His last blow must have jolted President Green's teeth until they rattled. Despite President Green's assertion that the issue between the A. F. of L. and the C. I. O. is that of democracy in labor vs. minority control, despite his desperate, middle-of-the-road, conciliatory campaign, one by one powerful unions have been slipping out of his control and into the C. I. O. camp. Last month, although he made a personal appearance and plea, the traditionally conservative International Typographical Union, meeting in Colorado Springs, voted to join the C. I. O.

All this surge of sympathy for vertical organization is, whispered the wise, sure to have its effect on building. And this despite the fact that Carpenter Hutcheson is, like many another potent building laborite, Miner Lewis's implacable foe. That the traditional backbone of horizontal ideology should be thought transferring its allegiance seemed heresy. But the straws are in the wind, not on the ground.



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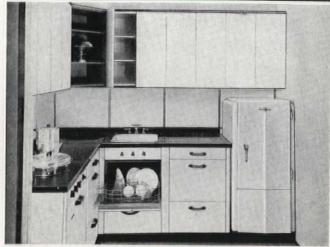
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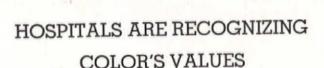
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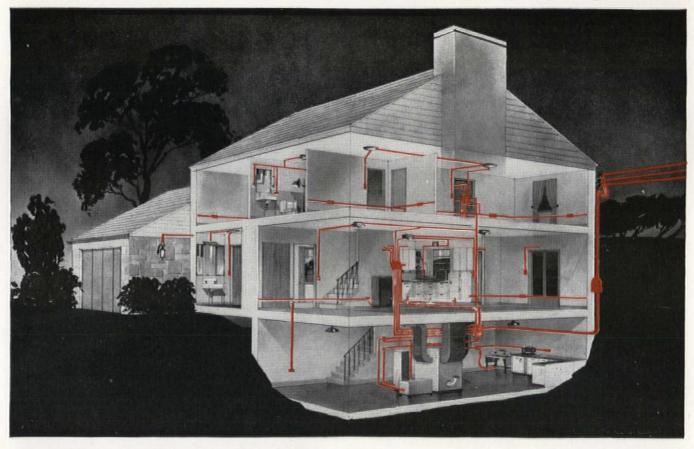
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## MEN AND DEEDS



Senator Couzens



C. I. O.'s Lewis



Thinker Freed



Pictures Inc

**Economist Kahn** 



Administrator Ickes



Decorator de Wolfe



Houser Bauer



Harris & Ewing

N histories of this parlous decade the last twelve months will probably be characterized as The Beginning of the Boom. Certainly the word Boom was freely and thankfully bandied about. In Manhattan Building Congress luncheons used it, and out in St. Louis Roy Wenzlick wrote a yellow-backed pamphlet called "The Coming Boom in Real Estate" which gave sage counsel to the layman and commanded considerable respect among the initiate (May). Los Angeles, with the help of Shirley Temple's press-agent, a Doc Bishop, ran up better than \$100,-000,000 worth of building permits in fourteen months, and so many people climbed into the building game in the East that in Queens, a rambling and raucous section of Long Island, brand new houses were going up at the rate of one every working hour (Aug. '36) -many of them ringing unpleasantly to the latest in gadgets, the two-toned door chime. Florida had its customary boom in construction, and all of the best and canniest of the old subdividers came back into the market, offering the public, with a unanimity that was startling, the Colonial style of architecture. Several architects built their own homes.

But still and all this 1935-1936 boom remained something of an economic sport, not quite like the beginning of any other boom within living memory and in many ways not quite like a boom at all. At the height of the political campaign, a time notoriously touched by the moon, it was even said that the boom was an act of faith propounded by the President and propagated by the Federal Housing Administration. For those who preferred to steer their minds by the facts there were two, informative and contradictory: 1935-1936 building was 70 per cent above that of the corresponding period for the previous year; yet it was also only about 45 per cent of the 1924-1927 average. A boom of such peculiar proportions could only be described as a nice hump in a deep valley, and this anomalous condition seems to have unsettled a great many people, causing them to originate more interesting and powerful ideas in one year than are usually produced in five.

#### INTEGRATION

The most persuasive theorem of the year was that the Building Industry, from architect to sand-hog, required more integration. The word was long and loose, and it was discovered that it could wrap itself around any number of disparate ideas.

**Architect Voorhees** 

Easily the most ambitious of these was advanced by the Committee For Economic Recovery, an imposing body of tycoons presided over by Allie Freed, a man of teeming energy who had just retired from the taxicab business with something over a million dollars in his pants. In September, the Committee issued an over-size document wistfully entitled "Home, Sweet Home" which advocated the formation of ten building companies, each capitalized at a minimum of \$1,000,000. The very size of these companies was to effect great savings in prefabrication, labor, finance charges, architectural fees, and promotion, and thus at last assure the building industry of a house which could be produced with the sleek economy of the automobile. The idea seemed feasible, but it proved impossible to raise the money or the courage required for the formation of ten million-dollar companies. The Committee issued several further reports, and then dug into anonymity for the duration of the political campaign in a tactful effort to avoid the

(Continued on page 72)

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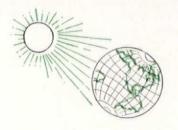
For many years, scientists and engineers have been carrying on experiments in comfort. From these they have arrived at the startling realization of the importance of the two different methods of heat transfer to the well being of the human body.

The first is Radiant Heat—the kind of heat we get from the sun or from any radiant surface. It is direct. It passes through space and through air without affecting the temperature of the air.

The second is Convected Heat. That is, the passage of heat by means of air. It is indirect. First, the air is heated by contact with a warmer body. Then in turn the air gives its heat to us by contact.

### RADIANT HEAT A VITAL NECESSITY

Cut off from a source of radiant heat, animals have died of exposure—despite an air temperature of 70°. In specially constructed rooms, with air at 104° and walls at 57°, people have been cold; because cold walls take radiant heat from the body which warmer air cannot replace. Yet with conditions reversed, with air approxi-



Radiant Heat—as from the sun—travels at a speed of 186,000 miles a second, directly to the earth, a cooler body.

mately 48°—and walls at approximately 80°, people are comfortable. Here the warmer walls radiated heat to the body, offsetting the otherwise chill-

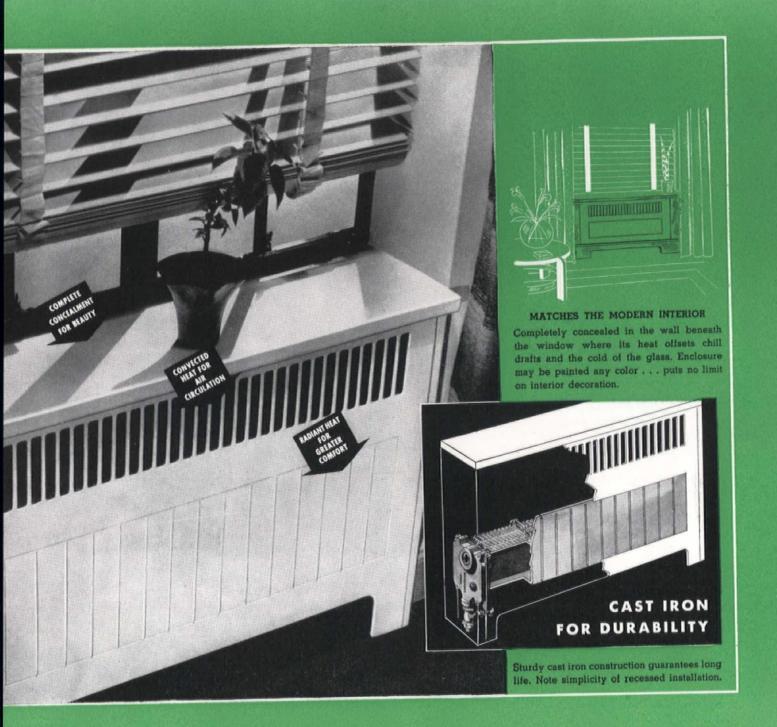
ing effect of cold air.

These are extreme cases, but they demonstrate that it is easier to create a feeling of comfort when people are in the presence of radiant heat. Maximum comfort comes from the correct combination of Radiant Heat first, and Convected Heat second.

The new Arco RADIANT Convector supplies both these kinds of heat directly and efficiently.

### SCIENTIFIC HEATING DEMANDED THIS NEW PRODUCT

The Arco Radiant Convector is a new type of radiator that includes all the advantages of radiant heat plus high convection efficiency and complete concealment. It was developed especially for the new American Radiator Conditioning Systems, but is applicable in any radiator heating system. It is as easily installed as any other type of radiator, in any system; steam, hot water or vapor.





Convected Heat (heated air) comes through the grilles of the new Arco Radiant Convector.



The Radiant Front sends out rays of radiant heat, just as the sun does, to warm comfortably.

Special information is being prepared that recounts the complete, absorbing story of radiant heat and the Arco Radiant Convector. You will find it a great help in providing these new advantages for the homes you plan. This new radiator when used as part of a new American Radiator Conditioning System enables you to provide radiant heat and air conditioning for average homes. "Time Saver" Standards are available for architects. Special information will be sent to builders on request. Write for the details today.

CONCEALED RADIATOR DIVISION

#### AMERICAN RADIATOR COMPANY

DIVISION OF AMERICAN RADIATOR & STANDARD SANITARY CORPORATION 40 West 40th Street, New York, N. Y.



CITY

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#### MANY STYLES OF ENCLOSURES

The large photograph and the two smaller sketches illustrate some of the variety of enclosures and panels that meet every decorative scheme and installation problem.

AMERICAN	RADIATOR	COMPANY
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COUPON TODAY Please send me complete facts on the new Arco

adiant	Convector.		
	I am an architect	I am a builder	•

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# Genasco roofs protect these 3

prominent St. Louis buildings

Southwestern Telephone Co. building St. Louis, Mo.

Architects: Mauran, Russell & Crowell in collaboration with architects of Southwestern Telephone Co.
Roofing Contractors: St. Louis Slate & Tile Roofing Co. and the Insulating Materials Co., St. Louis.
Genasco Standard Trinidad Built-up Roof applied in 1926.

Scottish Rite Cathedral St. Louis, Mo.

Architect: William B. Ittner, St.
Louis.
Roofing Contractors: Insulating &
Materials Co., St. Louis.
Genasco Standard Trinidad Built-up
Roof applied March 1923. Still in
excellent condition.



Federal Reserve Bank St. Louis, Mo.

Architects: Mauran, Russell & Crowell,
Roofing Contractors: Insulating & Materials Co., St. Louis.
Protected for more than a decade with a Genasco Standard Trindad Built-up Roof.

Three great structures in one city that are outstanding. The Southwestern Telephone Company's home...center of a great communications system. The Scottish Rite Cathedral...one of the most beautiful fraternal buildings in the entire country. The Federal Reserve Bank...that houses considerable of the nation's currency.

Buildings of such caliber as these required the finest most durable roofs. In each instance a Genasco Standard Trinidad Built-up Roof has been giving absolute protection for years, just as it has been doing on institutional, commercial, industrial and public buildings throughout the United States for decades.

Genasco Standard Trinidad Built-up Roofing gives the maximum service because it is made with alternate layers of Genasco All-Rag Felts and genuine Trinidad Native Lake Roofing Asphalt... asphalt that is most resistant to weather and the destructive action of the sun's actinic rays.

Send the coupon NOW for full information.

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ST. LOUIS





Roof security is felt with Trinidad





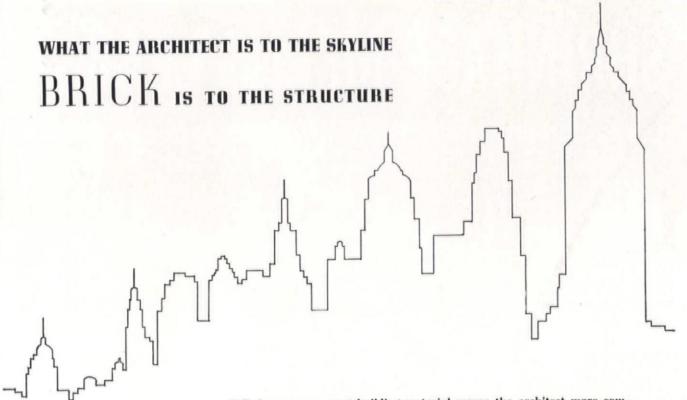
THE BARBER ASPHALT COMPANY AF 10 1600 Arch Street, Philadelphia, Pa.

Please send me the following:

- Copy of your book "For Your Roof" illustrating prominent buildings protected with Genasco Standard Trinidad Built-up Roofing.
- Don Graf Data Sheets outlining properties of Trinidad Lake Roofing Asphalt—also giving data on asphalt mastic flooring.

Name	 	

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■ Today no permanent building material serves the architect more completely than the local-made brick of his own locality. 

Through new developments in both plain and reinforced brick masonry, his conception of a modest dwelling or a towering skyscraper-its backbone, envelope, and decoration—may be expressed in the enduring beauty and unfailing integrity of this single material. 

These qualities are inseparable characteristics of sound construction and of good design. They visualize a more intimate partnership in building interest between architect and brick manufacturer than ever before. ■ It is important then that the architect's opportunities for expressing this relationship should be multiplied, not only to his own profit, but to the permanent advantage and economy of his clients. ■ With the publication of a new REGIONALIZED PLAN SERVICE for small homes, this Association takes a positive step in that direction, and assumes national leadership in a program to restore architectural service and counsel to its proper authorities. ■ Specifically designed to close-the-gap between architect and builder and to eliminate "stock plan" abuses, this new presentation will acquaint prospective owners with the best modern examples of regional architecture; provide an effective medium for direct contact with the architects of preferred designs in their own localities; encourage the use of better architecture in small homes everywhere. 
Details of the plan will be sent to architects on request.

Write: THE BRICK MANUFACTURERS ASSOCIATION OF AMERICA, 2121 GUARANTEE TITLE BUILDING, CLEVELAND, OHIO; or to these district organizations:

BRICK MANUFACTURERS ASS'N OF NEW YORK
J. H. Hansen, Secretary
1716 Grand Central Terminal, New York City, New York

BRICK MANUFACTURERS ASS'N OF CHICAGO G. E. Miller, Secretary 228 North La Salle Street, Chicago, Illinois BRICK MANUFACTURERS ASS'N OF NEW ENGLAND Frederick Heath, Jr., Secretary 627 State Mutual Building, Worcester, Massachusetts

THE NATIONAL AUTHORITY ON BRICK CONSTRUCTION

# SHRINKAGE MEANS LEAKS!

Hospital.



• {Above} Actual photo shows how Omicron Mortarproofing preserves the bond-makes possible weatherproof brick walls.

• {Upper Right} Actual photo of ordinary mortar joints. Note shrunken, cracked mortar, permitting rapid water seepage and destruction.

with OMICRO Mortarproofing ... THE FIRST SUCCESSFUL

ATTACK ON SHRINKAGE! Leaky brickwork can be prevented!

- if Omicron Mortarproofing is used when walls

Omicron Mortarproofing checks mortar shrinkage...prevents bond failure - because it successfully attacks from within the true causes of these common faults.

Proof? Hundreds of jobs, big and little, where performance defies doubt or criticism.

The Toronto Western Hospital, shown here, is one of the recent big Omicron Mortarproofing jobs. Ask Govan, Ferguson & Lindsay, Architects, Toronto, what their opinion is! And how little Omicron Mortarproofing really costs!

These facts can be readily proven on your job under actual working conditions. Write!

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In Canada: The Master Builders Company, Toronto

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OMETHING NEW-ULTRA N

The Nu-Bidet has proved itself to be a constructive force in the ion of sales both for modernizajobs and new construction.

chitects and building owners New England to California have ified one or more Nu-Bidets. Orhave come from as far away as andria, Egypt.

uilders and developers are using Nu-Bidet as a magnet to attract the lic to new homes and new apartts, because Nu-Bidet equipped, offer the only truly hygienic bath-

rgent inquiries are coming in y from every section of the United es and practically every civilized ntry on earth.

Vhy? Because the Nu-Bidet is the wer to a Long Felt Need.

ne plumbing contractor got a bathm modernization job of \$785 solely ause his customer wanted a Nuet and because it made everything in the bathroom look terribly out late. He told us that with the modization of the two other bathrooms in the home and also the kitchen, the job would probably amount to \$2500 to \$3000.

Still another sold ten Nu-Bidets in two days. And there will be plenty of modernization work result from those

Why? Because the Nu-Bidet is the Answer to a Long Felt Need. And they got their foot in the door and their customers in a buying mood with the Nu-Bidet.

Every physician, specialist and sanitary engineer who has seen the Nu-Bidet has pronounced it the greatest advance step in hygiene in the past twenty-five years and has given it unqualified approval.

Why? Because the Nu-Bidet is the Answer to a Long Felt Need.

You owe it to yourself and to the position you hold to know all about the Nu-Bidet, because to do otherwise would be to stand directly in your own

Why? Because the Nu-Bidet is something New-Ultra-Modern-and it creates sales. Use the coupon now.

#### WHAT IS THIS NU-BIDET? READ THIS!

The Nu-Bidet is a thoroughly modernized Sitz Bath...and more. The following uses make it a safeguard to health and as necessary to personal hygiene as your tooth brush or the bathroom itself.

Sitz Bath for personal hygiene and treatment of rectal disorders. Spray for same purpose and feminine hy-giene. Attachment for douche, enema and hydrotherapeutics, entirely eliminating the old rubber bag method.

The Nu-Bidet can be installed on any standard-size toilet bowl in less than two hours. It will convert the ordinary bathroom into one that is truly hygienic at a small investment. Use coupon now.

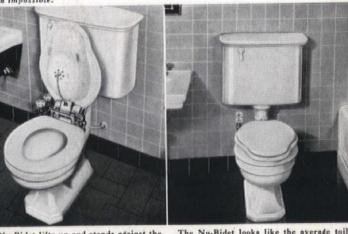
(LEENSAN CORPORATION · 341 Park Avenue · New York



The Nu-Bidet is a complete unit of seat, Nu-Bidet and lid in one assembly, which replaces th regular seat and lid. It is equipped with a specially-designed and patented vacuum breaker an also a specially-designed venturi-type siphon breaker, making back siphonage or a cross connection impossible.

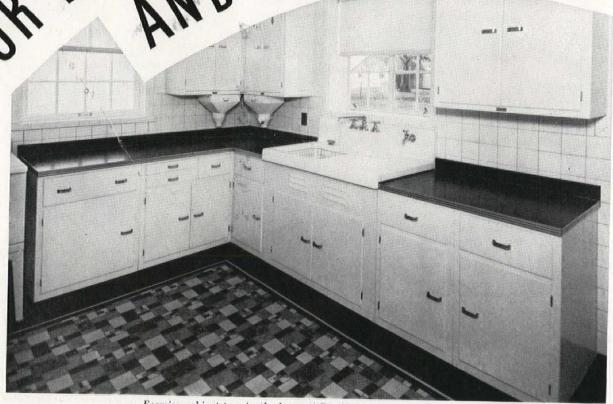


The Nu-Bidet looks like the average toile The Nu-Bidet lifts up and stands against the



lid when not in	use.	Ito cana space require	
KLEENSAN C Please send	ORP., 341 Park Avenue, N brochure, "Your Answer to	ew York, N. Y. a Long Felt Need."	p-10
Name			
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Address		City and State	
Jobber	Retail Plumber	Consumer	Architect [

CABINETS TOP LEANLINESS ORMICA CITCHEN CABILITY



Formica cabinet tops in the home of Dr. Chas. A. Stone, St. Louis. Jules E. Tarling, Architect, St. Louis. Installed by E. J. Huguenot.

FORMICA kitchen cabinet tops provide a highly durable non-metallic surface for kitchen cabinets that adds a great deal to the attractiveness of the room. The picture shows a type of top worked out to go with Hoosier Kitchen Cabinets.

The material is easy to keep clean, and does

not require vigorous and frequent polishing. It is not attacked by acids and mild alkalies. The colors are stable. It is available either for tops in which flat rim sinks are installed — in which case it is veneered on an asbestos board core — for tops in which there is no sink — built on a wood core.

Let us send you all the facts.

THE FORMICA INSULATION CO., 4620 SPRING GROVE AVE., CINCINNATI, OHIO



FOR BUILDING PURPOSES

## PRODUCTS AND PRACTICE ... PROGRESS

If there is any general lesson to be drawn from the experiences of 1936, it lies in the reaffirmation of this fact: Changes in building technique and in building materials and equipment are the product of gradual evolution rather than overnight change. So it always has been and, even building's revolutionaries are beginning to admit, so it will be tomorrow. Orderly progression is the characteristic method, but the pace quickens. A single example serves to highlight this truth. In the recent past a new word appeared on building's horizon: prefabrication. The idea of prefabrication, mass production of standardized units, was only less old than the hills, but the new word achieved for the idea a glamorous meaning: the units were not to be certain parts of a building, but all parts, factory fabricated into complete houses, engineered to the last inch and priced at fifty cents for each former building dollar's worth.

What has happened? Where is the prefabricated house, the perfect shelter of the mechanistic age? How many are standing—and lived in—and what did they cost?

On the ground they add up to less than a hundred. But more significant they still, with one or two exceptions, add up to laboratory experiments, unknown to factory assembly lines and still as comparatively high-priced as the 1908 Ford. But the big fact about the pre-

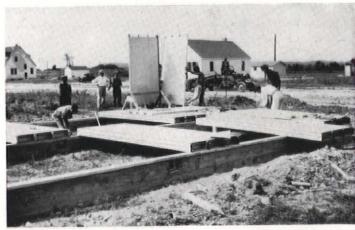
fabricated house is that it is still an unsolved problem; with a valid answer still nowhere in sight.

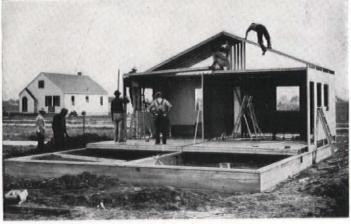
But the principle of prefabrication is today being applied to many parts of a house. Windows, electric outlets and their wiring, kitchen equipment, air conditioning plants, wall panels, need no longer be built up on the site from parts purchased here and there. Among them are mature products, well made, well designed, and at possible prices. Typically, the building designer and the building constructor have not yet fully mastered the use of these improved products.

The next step, the correlation of these products with each other and with the shell of the house, in other words, the integrated house, is on the threshhold. Today's techniques and Today's market continue to outdistance

performance in the field.

If this entire issue of The Forum and three more like it were devoted solely to Products and Practice it would still be impossible to cover all of the new products which have appeared in the last twelve months. Necessarily ignored in this survey, therefore, are many hundreds of items which fall in the category "new models, etc." The inclusion or omission of specific products or methods is intended to carry no implication; this department of The Forum continues to function chiefly as reporter.





GUNNISON MAGICHOMES ILLUSTRATES THE USE OF PLYWOOD PANELS IN PREFABRICATION

#### THE PREFABRICATED HOUSE

Recovering from its riotous reception of last year the prefabricated house has slowly and very slightly gained strength. Many proposals are still on paper. A few more houses have been built for experimental or promotional purposes, and a few organizations are marketing slightly more mature products. In none of the prefabricated houses has integration gone further than the shell; electrical work, plumbing, heating, and other equipment is still the same as in the conventionally built house.

#### Plywood

The outstanding 1936 development has been the use of plywood panels. Plywood glued to stiffening members forms panels capable of sustaining appreciable loads. This application of the "stressed covering" principle obtained through gluing permits the use of much lighter stiffening members than in a nailed up panel. The use of moisture resistant synthetic resin glue enables such panels to be

safely used for the exterior walls and the structural shell of a building.

General Houses, Inc., finding the cost of their steel house resulted in a high sales resistance, are selling a house with steel frame and plywood walls at a lower price.

The Forest Products Laboratory of the Department of Agriculture, which last year showed the industry how a one-story prefabricated house could be built almost entirely of plywood panels made on the "stressed covering" principle, has this year demonstrated the construction of a two story house.

Creating a furor in Louisville, Ky., Gunnison Magic Homes, Inc. completed half a dozen low cost houses in ten days with a small construction gang. Developing their method of construction along lines similar to those used by Forest Products Laboratory, the Gunnison house is frameless, has walls, floors, ceiling, and roof made of plywood panels. No interior finish, not even paint, need

(Continued on page 22)

# Many insulations less than 50%

Eagle insulation rates +++ on these 5 important points efficient! 2 Easy Installation 3 Fireproof 4 Moistureproof 5 Permanency About 4 inches thick . . . this layer of Eagle Insulation being blown (by special pneumatic process) between joists in the attic floor. This thick fireproof layer of mineral wool has remarkable efficiency—pays for itself in a few win-ters in fuel savings. Eagle Contractors in all large cities.



No building alterations. Any type of home is quickly insulated this modern way. Eagle Insulation fills the hollow spaces between wall studdings. Does not pack or settle after installation. Moisture - repellent. Efficient always.

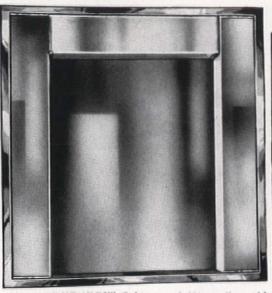


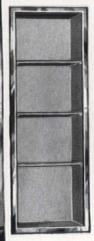
In bat form, too, for new construction. Eagle Insulating Bats are 15"x 18" x 35%" and 15"x 23"x 35%"—fit snugly between studdings and joists. Easily cut to fit around doors and windows. Fireproof, of course. See Sweet's Catalog for complete specifications.

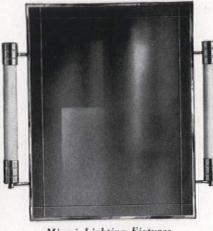
Eagle Insulation for Homes and Apartments

THE EAGLE-PICHER LEAD COMPANY . CINCINNATI, OHIO









Miami Lighting Fixtures for Bathroom Cabinets



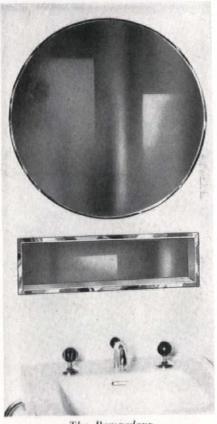


MIAMI CABINETS are the standard of quality in bathroom cabinets. With more than forty distinctive numbers in the line . . . many exclusively "Miami" creations . . . there is a Miami Cabinet to satisfy every modern need.

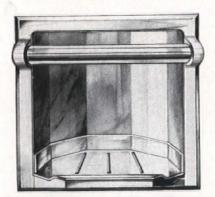
Constructed of Armco autobody steel, finished in enduring Miami Crystal Snow, Miami Cabinets give a lifetime of useful service. Copper backed mirrors are guaranteed for five years against silver spoilage. Piano type, chromium plated hinges.

We co-operate closely with architects and builders. See our complete catalog in Sweet's . . . or write for your copy.

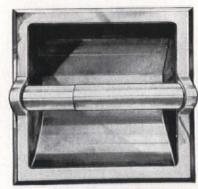
MIAMI CHROMIUM BATHROOM ACCESSORIES are thoroughly modern—popularly priced—easy and inexpensive to install. Complete descriptive literature on request.



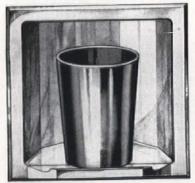
The Pompadour Round Mirror and Recessed Shelf



Miami Soap Holder with Self-draining Glass Tray No. 6000



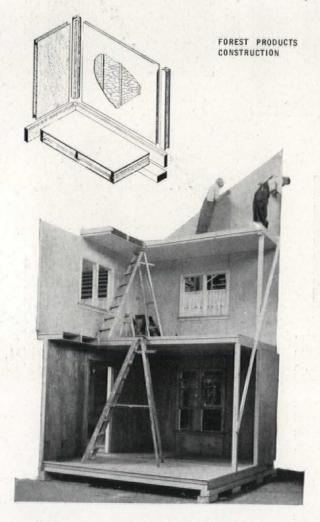
Miami Paper Holder No. 6002 (Chrome Roller) No. 6003 (Wood Roller)



Miami Tumbler Holder No. 6001

MIAMI CABINET DIVISION . The PHILIP CAREY COMPANY, Middletown, Ohio.

be applied on the job, nor must floors be laid, scraped, and finished. Panels come from the factory with the sides which will be exposed in the room finished in fine veneers already stained and waxed—walnut, mahogany, or gum for the walls, maple for ceilings, oak for floors. Exterior panels are insulated. Roofs are sloping and these panels are shingled over after erection. Exterior walls may be covered with siding or the plywood painted as desired. Door frames are, of course, built into the panels, as are also windows. In this house we have the almost complete



integration of structure and finish. Through this integration, the materials, and the easy method of assembly used, remarkable speed in erection and reasonable cost have been obtained.

#### Steel

Several new houses of steel have been built. National Houses, Inc. uses a steel pan construction for walls and floors, the exterior finish being painted steel. Estate Homes, Inc. has a light structural steel frame covered with zinc sheathing and I-pan steel floors and roof. Harnischfeger Corporation uses panels of wallboard fastened to both sides of a steel frame. Insul Steel Construction has a steel frame with wall panels of sheet steel applied to a fiber insulating board and gypsum plank subfloors and roof.

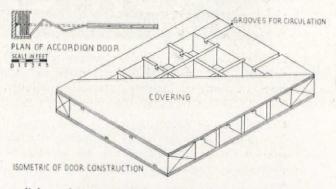
Other prefabricators such as Steel Buildings Inc., Insulated Steel Construction Co., and General Homes, Inc. continue with their steel buildings. (For steel frames only, see Steel page 30.)

#### PLYWOOD

Not limited to the prefabricated house, plywood is finding increasing use in the building field. The attractive appearance of fine woods obtainable in the outer veneer of plywood makes it desirable as an interior finish in all types of structures. Even steamship builders, satisfied with the flexibility of plywood and the moisture resistant property of synthetic resin glue, are using it to line the staterooms of the finest ocean liners. Since wood and steel can be glued together under pressure this combination finds use where greater resistance to combustion is desirable or where the flexibility of steel combined with the lighter weight or finish of wood is wanted. Combinations of these two materials are made by the Haskelite Manufacturing Co. and the Westinghouse Electric & Manufacturing Co. Plywood is also surfaced with attractive, durable, moisture resistant sheets of synthetic resins, such as "Formica" made by the Formica Insulation Co., "Micarta" of the Westinghouse Electric & Manufacturing Co., "Vinylite" of Carbide and Carbon Chemical Co., and the products of the Continental-Diamond Fibre Co. Because of its smoothness, plywood is finding increasing use as a form lining for architectural concrete, because of the strength of its large sheets as a sheathing material for wood frame houses. Temporary structures and enclosures surfaced with plywood are attractive and easily erected, demolished, and re-used.

#### **Plywood Doors and Partitions**

The Rezo Door is an adaptation of the "stressed covering" principle applied to flush door construction. The core of the door is built like the partitions of an egg-crate. These doors



are light and strong and the construction provides heat and sound insulation. In order to provide additional protection against warping, swelling, and shrinking, notched air vents in all the cross members permit air to circulate throughout the full length and width of the door. The heat insulating, sound isolating, and fire resistive qualities of this construction can be materially increased by filling the cells with rockwool or other insulating material.

The Paine Lumber Co., Ltd., of Oshkosh, Wis., is using the Rezo construction for all kinds of doors—interior and exterior, garage, cupboard, accordion—and for panel work and fixed or movable partitions.

#### CONCRETE

There has been an increasing use of concrete for building walls above ground. A number of larger buildings have used monolithic, and more particularly architectural, concrete walls. In house construction, thin, precast slabs, concrete masonry, concrete floors, and precast concrete joists have found wider acceptance. Light weight aggregates combined with cement have been used in acoustical and structural work. The value of high frequency vibrators in the placing of concrete has been more widely recognized and vibrators with higher frequency and greater power have been developed.

(Continued on page 26)



# FIRE MAY SHOOT A FLAMING ARROW

 Without warning — fire strikes silently and swiftly. And this is only one of the reasons for the increasing demand for steel joist construction.

Open web steel joists—for all light occupancy

buildings, including: schools, apartment houses, residences, churches -provide rigid, economical, lightweight floor and roof construction.

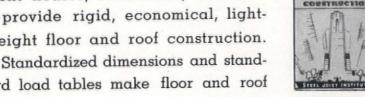
ard load tables make floor and roof

design fast and accurate. Buildings can go up faster. The open web allows economical installation of piping and conduit. These are some of the advantages obtained for

> architect, builder and owner with steel joist construction. Specify open web steel joists meeting Institute standards.

#### SEND FOR THIS NEW HANDBOOK

This 36-page book gives useful information—standard specifications for steel joists, standard loading tables, code of standard practice, etc. Send for your free copy today.



(Expanded Type)

STEEL JOIST

CONSTRUCTION

OPEN WEB

Bates Expanded Steel Corp., East Chicago, Ind. Bethlehem Steel Company, Bethlehem, Penn. Colorado Builders' Supply Co., Denver, Colo. Concrete Engineering Co. . . Omaha, Nebr.

STEEL JOIST INSTITUTE 201 North Wells Street, Chicago, Illinois (Welded Type)

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Truscon Steel Company . Youngstown, Ohio

PECIFY STANDARDIZED STEEL JOISTS - TESTED AND APPROVED BY STEEL JOIST INSTITUTE

# A New Service

# For Architects Designing TERRAZZO

To supply a convenient national headquarters to which architects can turn for dependable technical information on terrazzo, The National Terrazzo and Mosaic Association, Inc., announces the opening of a new office located at 1406 G Street NW, Washington, D. C.

With new building on the up-grade and remodeling showing continued activity, the field for terrazzo is growing every day. For the convenience of architects in planning terrazzo these advertisements present factual information covering the varied uses to which it is adaptable. If you are interested in any of these uses, a letter to the new Washington office of the Association will bring a prompt reply.

Following is a check list of specific uses of terrazzo. More detailed information will be furnished on request:

1. FLOORS. A range of color available in marble chips and pigments used in terrazzo enables the designer to plan floors that carry out the exact color scheme of any interior. Terrazzo's surface (85% marble, 15% portland cement matrix) is smooth and hard, free from breaks, easy to clean, hard to mar or stain, wear-resistant under heaviest traffic.

Whether it be in commercial buildings; libraries, hospitals or schools; hotels or residences—terrazzo meets all requirements for appearance, durability and economy in installation and maintenance.

2. STAIRS AND RAMPS. Because

terrazzo is placed, like concrete, in a plastic condition, it may be shaped to any desired form. Or it may be precast for special shapes and placed in units. It can be made non-slip.

- 3. COVES AND BASES. Of special value where utmost cleanliness is essential, as in hospitals and laboratories. Because the floor and cove or base are monolithic, there are no cracks or breaks to collect dirt.
- 4. PARTITIONS AND WAINSCOTS. Placed on metal studding and lath over a scratchcoat of portland cement and sand, partitions of terrazzo serve exceptionally well in shower rooms, toilet rooms and for similar installations.
- 5. ORNAMENTAL UNITS. Though usually job made, ornamental terrazzo is sometimes precast. It may take any desired form—from statuary to table tops.
- 6. SIDEWALKS. Increasingly popular in many parts of the country is the use of terrazzo for sidewalks, entrances to stores and buildings, outdoor dance floors and similar uses. The durability of terrazzo and the wide range of designs and colors it makes possible make it ideal for outdoor installation.

This information is presented by The National Terrazzo and Mosaic Association, Inc.—an organization of qualified terrazzo contractors formed for the purpose of establishing and maintaining quality standards in terrazzo installation. Detailed information and established specifications for terrazzo may be obtained from The National Terrazzo and Mosaic Association, Inc., 1406 G Street NW, Washington, D. C.

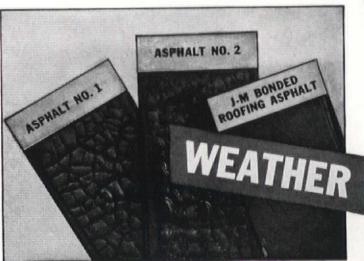
### THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

1406 G STREET NW, WASHINGTON, D. C.

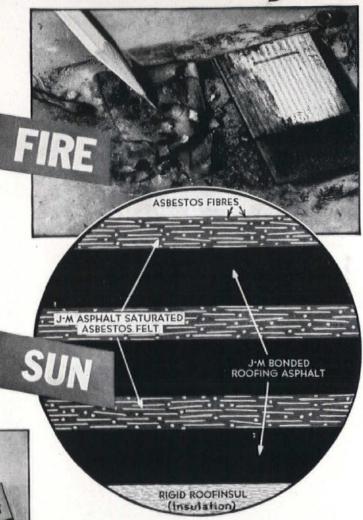
# 3 ROOFING ENEMIES that have had their day...

bestos Roofing Felts provide absolute fire protection. Two roofing "sandwiches"—one of Johns-Manville Asbestos Felts, and the other of ordinary rag felts—are stapled between sheets of highly inflammable material. Lighted, they burst into flame, consuming the rag felts in a few seconds, BUT LEAVING THE J-M ASBESTOS FELTS ABSOLUTELY UNHARMED. And the protection is permanent, for asbestos is mineral in character and unsurpassed in durability. Make this test yourself. We'll gladly send a set of roofing "sandwiches" on request.

SUN Even the intense drying-out action of the sun cannot damage J-M Asbestos Roofing Felts. In the enlarged section, at right, through a 3-ply asbestos roof, see how the individual asbestos fibres protect the impregnating asphalt from the sun. Solid, non-capillary, these fibres form a positive barrier against evaporation of the highly essential waterproofing oils in the asphalt. And asbestos, being imperishable and rotproof, insures an indefinite length of roof service at minimum upkeep.



Johns-Manville Smooth-Surfaced BONDED ASBESTOS ROOFS



WEATHER The superiority of Johns-Manville Bonded Asphalt is revealed by this weathering test. After water spray, arc light and refrigeration—representing rain, heat and cold—were played alternately on these three samples of roofing asphalts, until the equivalent of ten years of actual weathering had passed, the Johns-Manville Bonded Asphalt (extreme right) was still as good as new.

ABOVE ARE THE "REASONS WHY." Check them with actual results—and this pertinent fact stands out: Hundreds of Johns-Manville Built-Up Asbestos Roofs... after more than twenty years of virtually maintenance-free protection against fire, sun and weather . . . are still in excellent condition!

For a copy of our valuable roofing handbook, "Facts About Built-Up Roofs," and the roofing test "sandwiches," write to Johns-Manville, 22 East 40th Street, N. Y. C.



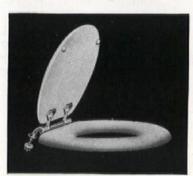
# THE SAFE and standard specification

• Architects specify Church Sani-Seats because there is no guesswork about them. They are the safe and standard specification. They are attractive and sanitary . . . moderately priced...extremely durable. Church quality and workmanship are present even in the lowest priced seat. The wide range of colors, in pearl or plain finish, places no limitation on the color scheme or decoration of your bathroom.

The glistening ever-clean appearance of Church sheet covered Seats comes from the thick covering. It will not chip, crack or peel. Soap and water keep it completely sanitary.

For commercial and industrial jobs, Church Sani-Black Seats are recommended. Molded of hard rubber, they are impervious to acids, time or abuse. They outlast the building. Their first cost is the last.

There is a model of Church Seat to meet every need. Famous Church quality and workmanship are present even in the lowest priced seats. Send today for catalogue showing complete line.



- CHURCH SHEET COVERED SEATS in white and color will not crack, chip or peel.
- CHURCH SANI-BLACK SEATS outlast the building. Absolutely indestructible.



C. F. CHURCH MFG. CO. · HOLYOKE, MASS.

Division of American Radiator & Standard Sanitary Corporation

## CHURCH Sani SEATS

#### PRODUCTS AND PRACTICE

(Continued from page 22)

#### **Quick Drying Process for Concrete**

A method of removing excess water from concrete so that forms can be removed within an hour or two after pouring is being used by the Vacuum Concrete Corporation. The water is removed from the surface of the concrete by suction produced in a vacuum pump connected by pipe and hose to the forms. It is claimed that the pressure exerted by the atmosphere when a vacuum is created inside the forms compacts the concrete, eliminating voids as well as squeezing out the water, thereby producing a dense, high-strength concrete. To form a channel for removing air and water, the surface of



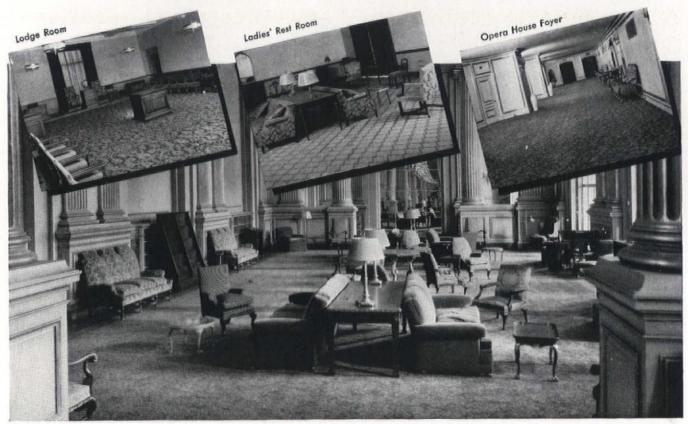
the form is grooved and covered with a filter cloth to prevent loss of cement. The grooves are connected to a suction hose through holes in the forms, the hose running to a receiver and vacuum pump mounted on a truck.

The quick drying and early strength of the concrete permits the rapid removal of the forms and their immediate re-use. In the case of a wall, it is feasible to make two lifts in an eight-hour shift. Because of the reduction of the outward pressure of the wet concrete when the vacuum is applied, it is possible to use light forms and eliminate tie wires or bolts through the wall. In fact, if some bulging of the concrete is not objectionable, it is possible to use heavy water-proof paper, supported by wood stiffeners, for vertical forms. Wet, easily flowing concrete can be used. The surface can be treated, before the final set has taken place, with a colored wash or cement finish which thus forms an integral part of the wall itself.

#### STEEL (For Structural Purposes)

Following improvements in the manufacture of structural steel which increase its strength and insure greater uniformity to the product, the American Institute of Steel Construction recommends increasing the basic unit stress of structural steel in tension from 18,000 to 20,000 lbs. per square inch. The Institute finds that the 20,000 lb. stress for comparable steel is permitted in the principal foreign countries of the world and believes that knowledge and current practice in the structural steel industry have so greatly improved that this is an absolutely safe figure. This increase in the basic unit stress will result in material economies obtained through the use of lighter steel members. Building codes must be changed, however, before advantage can be taken of this increased allowable stress in many of our cities and municipalities.

(Continued on page 30)



Main Lounge

# "My Schemes were built around Bigelow Carpets"... says Neel D. Parker,

Advisory Decorator of the San Francisco War Memorial



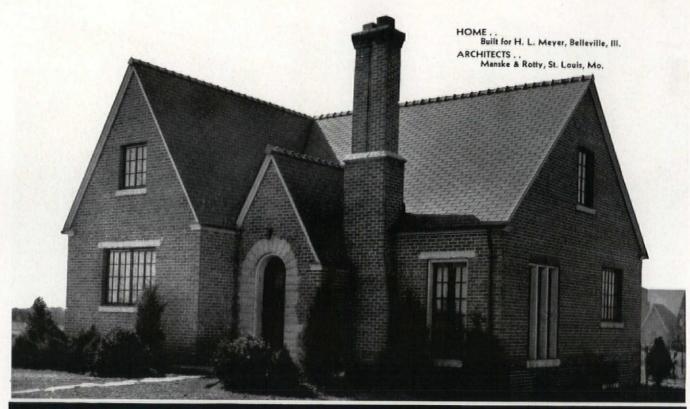
We're proud of the part Bigelow carpets played in decorating the luxurious War Memorial building in San Francisco.

We're proud, too, of the fine tribute paid Bigelow by Neel D. Parker, the advisory decorator on this project.

"I have been sold on Bigelow carpets for a long time," says Mr. Parker. "Bigelow not only makes excellent qualities, but has a very fine color range and unusual patterns as well. I have always found their service to be exceptional. They have men at the head of various departments who know all there is to know about carpets."

Architects and decorators all over the country have found us helpful in solving the multitude of carpeting problems that call for highly specialized knowledge. Whatever *your* problem, may we serve you, too, as Carpet Counsel? Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York, N. Y.

# Carpet Counsel by Bigelow Weavers



# INCREASE HOME COMFORT and FUEL ECONOMY at Negligible Extra Cost with...

About a year ago last winter, I purchased a Cork-Insulated roof for my residence in Edison Place. I observed that the snow on my roof melted last compared to other roofs in my neighborhood. I figured that cork insulation was a big help for comfort and economy, and I am well satisfied.

HARRY L. MEYER.

### Specify this Shingle for these Conditions

- 1—New homes in which standard roof insulation is not specified
- 2—New homes where additional roof insulation is desirable
- 3-Modernization of old homes



THIS IS THE ONLY SHINGLE BUILT with outside slate surface for weather protection; cork layer underneath for roof insulation. It adds definitely to the comfort of the home, both winter and summer.

Heat transmission measurements show that a roof of Carey Cork-Insulated Shingles makes possible the return of its small additional cost over an ordinary asphalt shingle roof, through the fuel savings of a single winter.

In addition to increased insulation and fuel saving, its extra thickness and modern, decorative colors add materially to roof beauty and distinction.

Time-tested in every section of the country. Samples and full details on request.



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LOOK BEFORE YOU BUY . . . compare carefully is the rule of the thirty housewives. It's the rule of careful buyers of the thirty housewives. It's the find American Blower, factories, shops, the find American Blower, factories, shops, the find the find American Blower, factories, shops, factories, sho for a special ten day comparison test. There's no obligation. We pay the freight both ways. Judge for yourself the merits of American Since Blower Unit Heaters. Don't put it Blower day. Look before you off another day. Look before you buy. Buy known quality and know buy.

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your heating con-tractor or mail the coupon today.

Sirocco Unit Heaters for floor, wall and ceiling installation wall and ceiling adaptable for particularly acaptable result of fifty large areas engineering experioneyears engineering to 1,267,500 ence. U. per hr.

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AMERICAN BLOWER CORPORATION

6000 RUSSELL STREET

DETROIT, MICHIGAN

GET THESE ADVANTAGES:

- Quieter operation assured by streamline in-Quieter operation assured by streamline in-lets and spring suspension motor mount-ings. All Venturatin units rated for sound. ings. All venturain units rated for sound.

  10 to 64% more heat, 4 to 45% more air,
  Tested
  with no increase in horsepower. toode,
  under A. S. H. & V. E. standard test
- Rugged heating elements with cast bronze nugged neating elements with cast bronze headers insure years of dependable service.
  - Trouble-free operation with brushless type, totally enclosed, quiet operating motors.
  - 5. New beauty of design styled by leading
    - industrial designers.
      The most complete line of Units in the world to select from (two types and Sirocco). All units guaranteed by and Sirocco and Sir

Radiator and Standard Sanitary Corpo-ration—the world's best known manu-facturer of heating equipment. Over 100,000 American Blower Units

over 100,000 American blower Units in use, heating more than 300 million square feet of floor space.

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CITY & STATE

MAKE A COMPARISON TEST

MAIL THIS COUPON



House at Winchester, Mass. Architect, Jerome B. Foster. Walls and roof, Cabot's Weathering Gray Creosote Shingle Stain; trim, Cabot's Collopakes in Haddam Barn Red

# The House in a Wooded Setting

FOR more than half a century, architects have used Cabot's Shingle Stains—for their preservative value and for the wide range of color effects which they make possible. The stained house is particularly effective in a wooded setting, or as a foil to painted houses in suburban districts. Originally created for shingles, Cabot's Stains are now being widely used on clapboard houses . . . Cabot's Shingle Stains are of two kinds—the texture-revealing, wood-preserving creosote stains, and the new heavy-bodied stains, which give the more nearly opaque effect preferred by some home buyers. For color card and complete information, mail coupon below.

# Cabot's

STAINS

Creosote - - Heavy-bodied

SAMUEL CABOT, INC.

141 Milk Street Boston, Mass.	Jamul babot Inc.
Please send me color card and Cabot's Shingle Stains	full information about
Name	
Address	AF-10-36

#### PRODUCTS AND PRACTICE

(Continued from page 26)

More houses than ever before are being erected with frames of light (strip) steel members. Builders are appreciating the sales appeal resulting from the use of this non-combustible, termite proof, non-shrinking material and are finding it easily handled and not excessive in cost. Combined with sub-floors of gypsum or concrete and walls of fire resistive materials, non-combustible houses are being built.

#### Steel Shell

A novel light-weight steel shell of the so-called "frameless" type has been developed by Walter H. Stulen, an architect on the faculty of the Carnegie Institute of Technology, working in conjunction with the American Sheet and Tin Plate Co. It is exceptionally light in weight and rigid. The panels can be nested for transportation. The rights to the use of this system are now owned by the Arcy Corporation.

#### **PLASTICS**

The urea plastic, familiarly known as "Beetle-Ware" when used for tableware, is now being molded into reflectors for lighting fixtures. When hot pressed without the addition of

coloring, it has translucent and reflective qualities, both of which are needed for semiindirect lighting. Its low coefficient of expansion, lightness, and toughness give it advantages over glass.

The fixture shown is made by Chase Brass and Copper Co. using a "Beetle" plastic reflector molded by Bryant Electric Co.

Flat sheets of "Beetle" having a high degree of translucency are made by impregnating transparent paper with urea resin. These are being used instead of glass in the box type

lighting fixture common in elevator cabs and marquises. Their toughness and low expansion reduces breakage. "Beetle" is made by the Beetle Products Division of the American Cyanamid Co.

Phenol resins are being used to give enduring color to hardware and lighting fixtures. Although not strong, they are very hard and have great depth of color, hence are excellent for hardware trim or the wall plates of lighting fixtures. The Lockwood Hardware Manufacturing Co.'s "Patrician" line of residence hardware includes doorknobs with bands of colored plastic. The National Brass Co. has escutcheons and other pieces of trim of phenol resin to give color to the hardware.

For synthetic resin covered plywood see "Plywood" page 22.

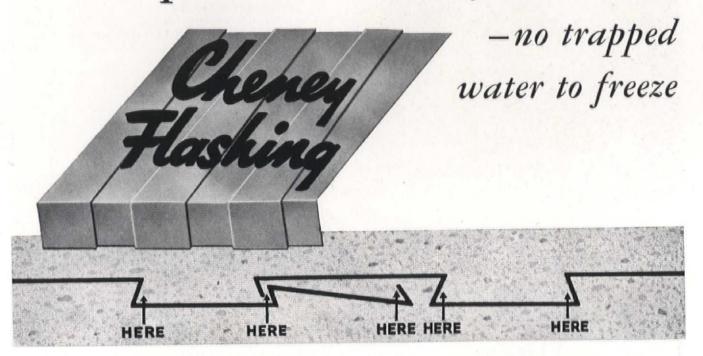
#### GLASS

. for a belt

As windows increased in area until they were really glass walls, the almost unimpeded transmission of heat became a problem and intense sunlight objectionable. Not only have improvements in these glass walls been effected but glass manufacturers continue to find new forms and uses for their product. Opaque glass tile or panels find increasing use as exterior and interior decorative and protective surfaces as do glass fibers for insulation and for air filters.

(Continued on page 34)

# A "Weep Hole" at Every "Z" Bend

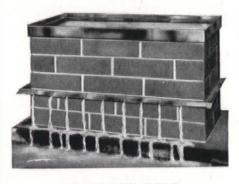


HENEY Flashing provides drainage with unique efficiency. This is done by means of the "Z" bends—the very same feature that is largely responsible for Cheney Flashing bonding superiority, and for its automatic compensation for expansion and contraction.

Shrinkage of mortar forms a "weep hole" in every "Z" bend. No water is trapped to freeze and crumble mortar and masonry.

Interlocking lap-joint at ends of each sheet form a continuous water-tight flashing, without soldering.

Revere Thru-Wall Flashing is available at a somewhat lower price than Cheney Flashing, and is recommended where a bond in all lateral directions is sufficient. Supplied in sheet form for cutting and bending as desired.



DRAINAGE TEST

Photo shows brick test panel of standard construction with Cheney Flashing installed and bottomless pan on top.

Water equivalent to cloudburst precipitation, about 24 inches per hour, was poured into pan. In 37 seconds the water flowed out of wall over flashing, from each lower key, the length of panel, proving that Cheney Flashing automatically provides its own weep holes.

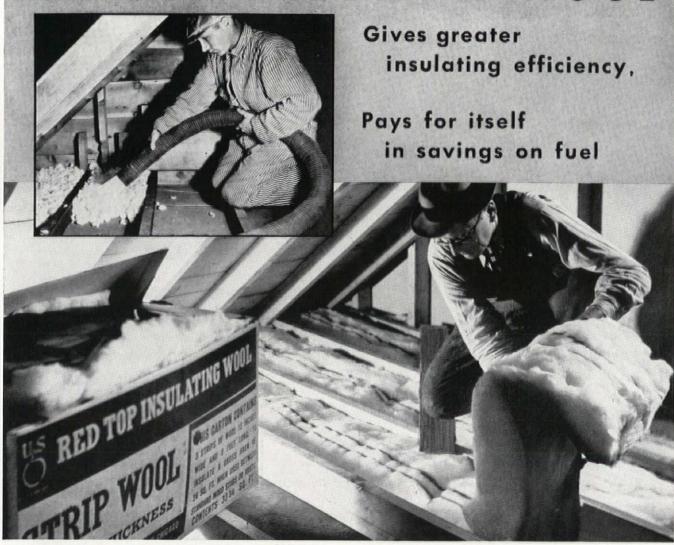
# Revere Copper and Brass



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### RED TOP INSULATING WOOL



■ To know just how superior Red Top Insulating Wool is you have only to consider this fact: a standard four-inch thickness has eight to ten times the efficiency of typical half-inch insulations. And the installed cost is so low that Red Top soon pays for itself in fuel saving.

SPECIAL TYPES. Red Top is now made in new special types with special advantages—Junior Bat Wool, Strip Wool and Bat Wool. Junior Bats offer new convenience and economy in hand packing. Strip Wool fits snugly between studding, floor to ceiling, in easy-to-apply nine-foot strips. Both Strip Wool and Bat Wool units have a tough water-proof facing with flanged edges for nailing to studs or rafters. All have outstanding insulation efficiency.

FIREPROOF, PERMANENT. There is no other insulation quite like Red Top Wool. It is unique in its light weight... only eight ounces per square foot four inches thick... in its life, its resiliency and in its clean white appearance. Red Top stays in place to give long and efficient service. It is a wool made of fine blown sterile mineral fibers—no shot—no non-insulating impurities. Red Top Wool is fireproof, vermin-proof, permanent.

A PRACTICAL INSULATION. Not a one purpose insulation, Red Top helps to solve many problems...insulation of the new home, reconditioning the old home, blown-in wool installations, economical use of automatic heat, reduction of fuel costs in homes expensive to heat, and always the achievement of comfort summer and winter.

COMPLETE SPECIFICATION DATA. Send for specification book pictured below. Bat Wool, Strip Wool, Junior Bat Wool, Nodulated and Granulated Wool are all described and a specification is provided for each. To insure proper application USG approved applicators all over the country are at your service.

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	rge, a copy of cification Book.	



UNITED STATES GYPSUM COMPANY



# THIS UNIT (The Norge Fine-Air Conditioning Furnace Unit) MAKES THE MODERN HOME MORE MODERN

For the modern home Norge offers the complete solution to the problem of heating and air conditioning. The Fine-Air Conditioning Furnace Unit performs the functions of warming, filtering, humidifying and circulating air with an amazing degree of efficiency—provides plenty of hot water at no additional cost.

In summer this unit may be used to circulate filtered, night-cooled air or—if desired—may be supplemented with cooling and de-humidifying equipment.

Get the detailed facts about the Norge Unit. Call the Norge distributor or write direct to us for descriptive literature.

NORGE HEATING AND CONDITIONING DIVISION, Borg-Warner Corp., Detroit, Mich. WARREN NORGE CO., Inc.

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# NORGE Fine-Air Conditioning Furnace Unit

Get the complete story of Norge home appliances for apartment or home installation. There are distinct advantages in standardizing on Norge equipment, apart from the exceptionally high quality of the products themselves.



#### Skyline Buildings made weather-tight with PECORA CALKING COMPOUND

Mighty impressive is the Sky Line of important structures made weather-tight during the past few years with Pecora Calking Compound. The coast to coast roll call includes:

Cincinnati Union Terminal, Cincinnati, O.
Mark Hopkins Hotel, San Francisco, Cal.
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12 National City Bank Buildings in New York, N. Y.
West Philadelphia Station, Penn. R.R., Phila., Pa.
Indiana Bell Telephone Bldg., Indianapolis, Ind.
Insurance Company of North America, New York, N. Y.
Duke University, Charlotte, N. C.
I. C. C. Labor Building, Wash., D. C. and about 300 other new
Federal Buildings in all parts of the U. S.

For further details see Sweet's Catalogue or write direct to us.

### **Pecora Paint Company**

MEMBER PRODUCERS' COUNCIL, INC.

Fourth and Venango Streets PHILADELPHIA, PA.

Established 1862 by Smith Bowen

SUCTION MASTIC for Structural Glass

Also Makers of

SASH PUTTIES MORTAR STAINS

#### PRODUCTS AND PRACTICE

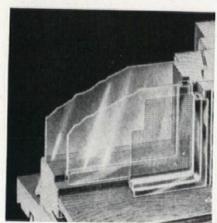
(Continued from page 30)

#### **New Types of Glass**

Techniques have been recently perfected for the manufacture of stronger and tougher sheets of glass, and for a glass which cuts out much of the infra red (heat) rays and therefore transmits a colder light. Colored mirrors are increasingly used even as an exterior facing material on shops and cafes.

#### **Double Glazing**

The practice of building with well insulated walls and large single glazed window areas is like appearing at a function impeccably dressed—but sans shoes and collar. A number of manufacturers of double hung and casement windows are now making an additional light sash which is fastened to

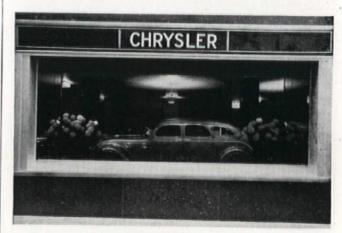


frame or sash so as to be easily removable for cleaning. Two layers of glass with 1/4 to 1/2 inch air space between reduce, by more than half. the heat transmission through the glass of the window, and raise the relative humidity which can be maintained without condensation on the glass.

The Thermopane Co. is making glass panels with which windows can be double glazed in one operation and which have two instead of four glass surfaces to clean. The panel consists of two sheets of glass with air space between. The air space is dehydrated and sealed. Thermopane is made with ½ and ¼ in. air spaces.

#### Invisible Window

When you look at a show window, though it may be the most perfect glass, you frequently see mirrored on its surface vague images of yourself, other passers-by, and opposite buildings.

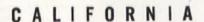


But a window can be curved so that light will be reflected to a point where it is not visible to the observer. Built on this principle are the windows of the Invisible Glass Company of America, Inc. The glass is curved so that all light striking it is reflected up or down into a trough lined with black glass, and the illusion of a windowless show-case is complete.

(Continued on page 38)

# CORRECT

FROM COAST TO COAST



Alameda County Court House, Oakland. Will G. Corlett, Henry A. Minton, James W. Plachek, Wm. E. Schirmer, and Carl Werner, architects. G. M. Simonson, consulting engineer. Alta Electric & Mechanical Company, heating contractors; Ace Sheet Metal Works, ventilating contractors; San Francisco.

JOHNSON automatic temperature and humidity control systems have stood the test of actual service in thousands of buildings of every conceivable type, in every part of the continent. Regardless of climatic conditions or of the particular problems involved, JOHNSON apparatus is available for every application in the automatic regulation of heating, cooling, ventilating and air conditioning. . . The three outstanding buildings illustrated, fine in appearance and equally fine in equipment, are examples of the confidence reposed in JOHNSON systems by individuals and by city, state and national officials.

#### MISSOURI

Municipal Auditorium, Kansas City. Gentry, Voskamp & Neville; Hoit, Price & Barnes, architects. W. L. Cassell, consulting engineer. U. S. Engineering Company, heating and ventilating contractors.

In the Alameda County Court House, JOHNSON controls temperatures for five central ventilating systems, and operates thirteen heating-cooling units for both "summer" and "winter" service, while JOHNSON "Duo-Stats" regulate eight heating zones in accordance with the relationship between outdoor and radiator temperatures. . . . At Kansas City, 239 JOHNSON room thermostats operate an equal number of valves on direct radiators and unit heaters, but most of the heating—and all of the cooling—is accomplished by eight JOHNSON-controlled central fan plants. . . . Temperatures in Justices' suites and other important rooms in the home of the U. S. Supreme Court are regulated by nearly half a hundred JOHNSON thermostats, and JOHNSON valves and dampers are in command at the ten air conditioning systems.

#### WASHINGTON, D.C.

U. S. Supreme Court Building. Photograph used by permission of Mr. Cass Gilbert, Jr., architect. Carrier Engineering Company, air conditioning contractors.

JOHNSON SERVICE COMPANY Milwaukee, Wis., and All Principal Cities.

# EMPERATURE CONTROL

For Heating - Cooling - Ventilating & Air Conditioning Systems

## Now a LARGE OIL-BURNING BOILER



AT last, a large-sized oil-burning boiler designed especially for oil—the PIERCE OIL No. 2! It brings to apartment, office and industrial buildings . . . to large homes . . . the economy of FIVE-WAY HEAT TRAVEL, plus the added efficiency of a FIRING CHAMBER COMPLETELY SURROUNDED BY WATER.

Two vitally important features combined in a single boiler, FIRST to capture the highest possible amount of heat from the flame . . . and SECOND to extract a greater amount of heat from burning gases passing through the flues.

PIERCE OIL No. 2 will take care of any large installation that requires up to 3,000 sq. ft. of steam radiation. Note from the illustration how the flame is entirely surrounded by water—even at the bottom. How it makes two complete passes through the firing chamber and is then drawn three times through narrow flues-designed to extract the last possible unit of heat.

The PIERCE OIL No. 2 completes a full line of Pierce oil-burning boilers. Makes it possible for you to handle all types of installations . . from small homes up to the large jobs where two or more of these oil-burning boilers may be operated in battery. Be fully informed about these important boilers. Mail the coupon today,

PIERCE BUTLER RADIATOR CORP., Syracuse, New York

enter section showing fins for capturing the heat.

#### FEATURES

- Designed exclusively for oil . . . For steam,
- hot water, or vapor
- heating systems . . .
- Completely automatic . . . Low oil con-
- sumption . . . Attractive insulated
- jacket . . . Operates with any oil burner
- . . Front or rear firing.

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Stoker-Fired Boilers Steel Boilers Radiation Ames Una-Flow Engines

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Mail this coupon today>>>

# FOR Carefree DOORS SPECIFY STANLEY HARDWARE



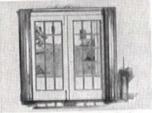
Front Door—Stanley BB180 Ball Bearing Butts



Interior Door-Stanley 239 or 241 Butts



Closet Door-Stanley Nos. 857 and



French Doors-Stanley Surface Bolts No. 381



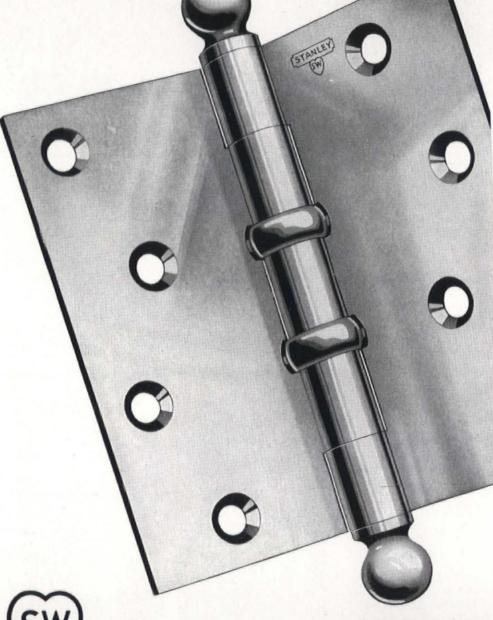
Double-Acting Pantry Doors-Stanley No. BB157 Double-Acting Floor Hinge



Garage Doors-For Finest Equipment. Stanley "Roll-Up" Garage Doors



New Or Old Garage Doors-Stanley "Swing-Up" Garage Door Hardware



THE SYMBOL OF LEADERSHIP
IN DOOR HARDWARE FOR 90 YEARS

THE STANLEY WORKS



New Britain, Conn.

# WANTED-the Finest Shades for America's New Skyline!



Top Left: Brooklyn Technical High School, Brooklyn, N. Y. Top Right: U. S. Post Office, Boston, Mass. Below: High School at Scranton, Pa. Equipped throughout with Bontex washable window shades.

 It is significant that many of the big modern buildings jutting into America's new skyline are equipped with Bontex Window Shades.

Bontex shade cloth has proved its ability to give unusually long service at low-per-year cost—in schools, office buildings, public buildings of all types, apartments and homes.

Bontex meets the most rigid requirements. Withstands rough usage. Does not fray, pinhole or crack. Can be scrubbed—cleaned quickly and perfectly—with soap and water. Waterproof, colorfast—retains original finish, color and freshness after 20 or more scrubbings.

These are demonstrated facts—features proved in impartial tests by Delineator and Lux Laboratories and South Florida Test Service. Bontex also conforms to Government specifications CCC-C-521 and DDD-S-251. Its quality is guaranteed by the Government label.

The major part of window shade costs—measuring, making and installation—is practically the same whether using Bontex or an inferior shadecloth. Recommend Bontex for true economy. Translucent, semi-opaque and opaque—in a full range of colors including beautiful printed patterns.

Write us for samples and name of your Bontex distributor.

#### COLUMBUS COATED FABRICS CORPORATION

DEPT. AF-106 COLUMBUS :: OHIO



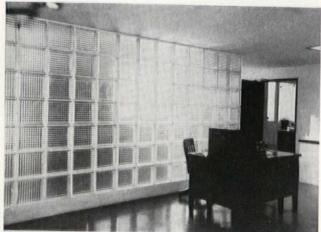
See Wall-Tex Advertisement On Page 90

#### PRODUCTS AND PRACTICE

(Continued from page 34)

#### Glass Masonry

Glass block is now in commercial production by Owens-Illinois Glass Co., Corning Glass Works and Structural Glass Corp. Architects have jumped at the opportunity to use



CORNING GLASS WORKS

John Beinert

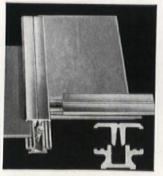


OWENS-ILLINOIS GLASS CO.

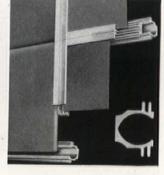
translucent walls, at once strong and reasonably well insulated. The past year has seen a large number of installations of this material. Partitions, large inserts in exterior walls, even an entire building, have been built of glass units laid up as masonry.

#### SURFACE MATERIALS AND THEIR HOLDING DEVICES

One of the most important items in modern decorative treatment is the surface application of thin sheets of non-corrosive



REVECON SYSTEM

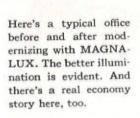


metals, enameled steel, plywood, plastic, wall boards, structural glass, etc. Such materials are being widely used for both interior and exterior surfaces and a number of methods (Continued on page 42)

## FOR MODERN OFFICE ILLUMINATION SPECIFY

# MAGNALUX

Better Light · Better Sight





• MAGNALUX is more than an ordinary piece of glassware and a lamp. It is a scientificallydesigned luminaire...designed to produce eye-comfort illumination, engineered to provide more light for the money, and styled to blend harmoniously with modern furnishings.

That's why MAGNALUX proves the over-

whelming choice of all who compare its illumination with that of the ordinary lighting unit. That's why MAGNALUX is today considered the standard by which all modern illumination is measured.

Whether you are selecting modern illumination for your own building, or specifying it for a client, it will pay you to fully understand MAGNALUX features and performance. Ask your Westinghouse Distributor for an On-the-Spot Demonstration. There's no cost or obligation... you can see and compare, right in your own office, the distinctive features of MAGNALUX modern illumination. Westinghouse Electric & Manufacturing Company, Lighting Division, Edgewater Park, Cleveland, Ohio.

WESTINGHOUSE BETTER LIGHTING IS AS NEAR TO YOU AS YOUR TELEPHONE

WHEN YOU THINK OF Sighting THINK OF Westinghouse



Available, with base cabinets, in 17 standard sizes and ANY intermediate length from 48" to 144".

ERE is the very latest step in the steady progress of bringing beauty to the then. That's what you have come to extend the relationship of the steady of the kitchen. pect of Whitehead, the maker, and Monel\*, the material.

For it was Monel that first led the women of America to expect beauty—and efficiency—in sinks, with the "Streamline" model back in 1931. The next step was the "Straitline"; and in 1934 Whitehead led an advance everyone has followed, with the cabinet sink.

You can put this newest model 25 series in any kitchen you plan or modernize, with ASSURANCE. Assurance that you're giving your clients the utmost—with features for convenience and beauty no other sink has.

This sink is head-and-shoulders above its competitors in construction. It should be . for Monel, crack-proof, rust-proof, accident-proof, keeps its lustre and outlasts most houses, once it's in.

Prices are as low as ever. For the com-Prices are as low as ever. For the complete list of sizes, ask for our new catalogue, "Whitehead Step-Saving Kitchens." Address: Whitehead Metal Products Co. of New York, Inc., 304 Hudson Street, New York, N. Y.

#### THE INTERNATIONAL NICKEL COMPANY, INC.

67 WALL STREET NEW YORK, N. Y.



\*Monel is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third cop-per. This alloy is mined, smelted, refined, rolled and marketed solely by Inter-national Nickel.

- Bowl moved forward to 2½" from edge no more back-strain from leaning.
- Integral backsplash construction, either 1½" or 8" high.
- Soap dish and glass holder stamped in sink deck. Easy to clean, easy to work with.
- 4. Pedestal swing nozzle faucet mounted on deck. (Easier to install too.)
- 18 standard single and double bowl sizes from 48" to 144". Also avail-able in any intermediate size in fractions of an inch.
- Added to all this, remember it's Monel, which means: rust-proof, corrosion-resistant, long-lived, shin-ing crystal-clear for years with ordi-nary attention.

MONEL

# To the architect

# LOOKING FOR A HEATING SYSTEM WITH A DIFFERENCE

● Crane Boilers — with scores of refinements in design and manufacture—have three outstanding points of superiority. They can be erected in much less time than the ordinary boiler. They have 50 per cent more horizontal "Ceiling" heating surface over the hot gases than ordinary boilers. And patented baffles direct the water across the hottest points.

Quick and easy erection saves in installation costs and gives the contractor time and opportunity to make a tight job of it. High efficiency reduces your client's fuel bills, heats every corner of his house. You gain a friend because your client is pleased when you install a Crane Boiler.

Completing a Crane Heating System with Crane Directed Radiation—the most advanced idea in radiator heat in years—and with Crane Humidifying Radiators—adequate capacity with negligible operating costs—results in a quality installation, the long life and efficient operation of which make the most economical heating system you can specify.

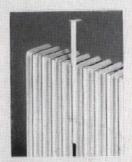
The Crane line is adequate for every residential job. Specify Crane heating equipment when laying out new residences or making plans for the modernization of existing ones. Crane Round Boiler for Coal Burning
—the boiler with 24 radical improvements which result in substantial
economies and great ease of tending. Readily adapted to oil burning.



Humidifying Radiator Large evaporating capacity in small space. Cabinet enclosure. Easily, quickly installed, replacing ordinary radiation. Practically no operating cost.



S 0 & W 0 Sectional Boller for automatic firing. The SO & WO has super-efficient extended ceiling surface. For oil burner or stoker.



Directed Radiation. Invisible shields direct heat outwardly into room, minimizing ceiling-floor temperature difference, protecting walls, stc. from smudge.

# CRANE

CRANE CO., GENERAL OFFICES: 836 SOUTH MICHIGAN AVENUE, CHICAGO, ILL. • NEW YORK: 23 W. 44TH STREET

Branches and Sales Offices in One Hundred and Sixty Cities

VALVES, FITTINGS, FABRICATED PIPE, PUMPS, HEATING AND PLUMBING MATERIAL

# AUTOMATIC HEAT

AND AIR CONDITIONING



The importance of proper air conditioning upon the health of the family cannot be minimized. In fact, automatic heat and air conditioning is equally as important a factor in guarding the family's health as it is in providing convenience and comfort. That is why architects who for years have specified Herman Nelson Air-Conditioning Equipment for schools have welcomed the entrance of Herman Nelson in the residential and small commercial field. They know that Herman Nelson will bring to this field equipment of the same quality, efficiency and practicability which has revolutionized schoolroom heating and air conditioning.

Now you can recommend Herman Nelson Automatic Heat and Air-Conditioning products of the same quality and efficiency you have known for years. These products are made available through carefully selected distributors.



REQUIREMENT

Self Contained

Air Conditioner





Automatic Heat and Air Conditioning

GENERAL OFFICES AND FACTORIES AT MOLINE, ILLINOIS

#### PRODUCTS AND PRACTICE

(Continued from page 38)

have been developed to hold them to structural frames and surfaces. Most of these methods permit the ready change of the panels or tiles which they hold.

The Revecon system made by Revere Copper and Brass Incorporated is a method of using a framework of extruded aluminum alloy sections to construct surfaces with any type of rigid sheet finishing material. Holding members attached to the framing or structural surface with nails, screws, or bolts, contain slots into which gripping members set. The sheets clip into grooves in the gripping members, and the joints are pointed, or covered with cap members. Mastic is used on the edges of the sheets. Sheets up to ½ in, in thickness may be used.

There are a large number of sections for almost every conceivable purpose—exterior construction, light interior construction, capped joints, pointed joints, store fronts, door frames, internal and external angles, different types of materials.

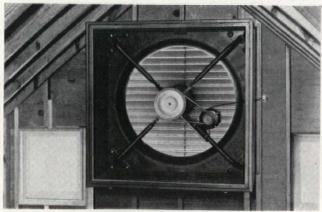
Such a system has a number of advantages. It is light in weight, rigid, weathertight, requires but little depth for its construction, alterations are easily made, different kinds of panels may be used on the same frame. It can be used to advantage on permanent or temporary structures and for remodeling.

#### AIR CONDITIONING

Air conditioning is spreading rapidly. Many installations of summer conditioning have been made in the past year in restaurants, shops, railroad cars, and some in office buildings and apartments. The packaged unit has made winter conditioning installations economically possible in many houses. These units take two forms: the room unit and the plant. The packaged plant consists of heating device, humidifier, filter, and fan, all enclosed within one jacket and automatically controlled, with provision for connecting a cooling or dehumidifying device. The room unit, otherwise similar, usually contains a cooling rather than a heating unit.

#### Attic Fans

Through the use of the attic fan the advantages of air movement may be obtained at a comparatively low cost. Without interfering in any way with existing heating plants, the attic fan provides for the circulation of air, drawing in fresh air through windows and doors and exhausting it through a louver near the roof.



VENTURA FAN OF AMERICAN BLOWER CORPORATION

Through the use of a properly designed fan and housing, the gradual, slow movement of a large body of air is obtained. This adds considerably to summer comfort, preventing over-

(Continued on page 46)



#### ADDED FIRE PROTECTION

Sheetrock gives unusual fire protection. Made from gypsum—a mineral -it will not burn and will not support combustion. Used as a wallboard in typical wallboard construction it helps to protect the wood framework from fire. That is why we say-When you Build with Wood - PROTECT WITH GYPSUM.

#### AVAILABLE IN FOUR FINISHES

Wood Grained Sheetrock comes in four finishes—Knotty Pine, Douglas Fir, Walnut and Matched Walnut all faithful reproductions of choice selected woods. The swatches reproduced show Wood Grained Sheet-UoS rock finishes one-quarter actual size. Send for Free book showing finishes in full color.

UNITED STATES GYPSUM COMPANY 300 W. Adams St., Chicago, Ill.	5 0.E
Please send me your FREE book "Sheetrock in Wood Grained Fin- ishes."	
Name	
Address	
CityState	性的問題

GYPSUM



COMPANY

UNITED

SHEETROCK . . . in Matched Walnut Finish

STATES

SHEETROCK . .

PRODUCT

SHEETROCK . . . in Douglas fir Finish

HEETROCK . . . in Walnut Finish

O F

The New Sky-line in American Building...

## enduring. CONCRETE

Construct your new building as a monolith—firesafe, permanent, economical. That's the thrifty, modern way to build . . . walls and ornamental detail integral with frame and floors.

A new building of architectural concrete will reduce fire hazard and insurance rates, insure permanently low maintenance . . . eliminate vibration and remove floor load handicaps—to say nothing of bettering working conditions and giving you a more efficient layout.

And beyond all this a distinctive building of architectural concrete will have great prestige value.

Ask your architect and engineer about this moneysaving technique. Or write for one of our engineers to call. Free illustrated booklet, "Beauty in Walls of Architectural Concrete," on request.

#### PORTLAND CEMENT ASSOCIATION

Dept. A10-7, 33 W. Grand Ave., Chicago, III.

A distinctive exterior of architectural concrete—
the new printing and engraving plant of Clarke
E Courts, Houston, Texas. Joseph Finger, architect. Southwestern Construction Company,
tect. Southwestern Moore, structural engineer.
builders. Walter P. Moore, structural engineer.

Architectural Concrete

LARKE & COURT:

FRAME AND FLOORS CAST INTEG

N-INCOP!

## THE SAFEST HEAT

Children play around the Whiting Stoker with impunity. There are no moving parts exposed. All of the mechanism is enclosed in a smart, modern, colorful cabinet. Explosions are unknown. Nor can storms cripple wire service and shut down the heating plant entirely. With a Whiting, the furnace may always be hand-fired in such an emergency. By specifying Whiting Automatic Heat, the basement may be designed as a game room or playroom with perfect safety. Clean, odorless, and quiet-with no ash problem-the Whiting Stoker permits you to add an extra floor to the home without committing your client to the use of high-priced fuels.



# WHITING STOKER



GREATER HEATING LUXURY
AT A LOWER COST

AUTOMATIC COAL BURNERS FOR ANY FURNACE OR BOILER

#### WHITING CORPORATION

15630 SOUTH HALSTED STREET, HARVEY (A Chicago Suburb), ILLINOIS

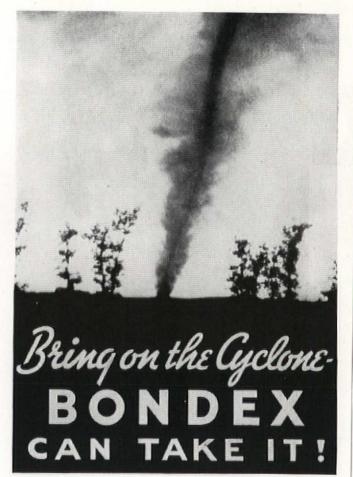


Photo by Underwood & Underwood

Newest evidence of the ability of Bondex to resist the elements comes from Porto Rico. Ramos Cobian, President of United Theatres, Inc., writes from San Juan:—

"This paint (Bondex) has been used in the Fox Theatre in Miramar for the past five years and same is in perfect condition after having passed through the last cyclone without the necessity of having the theatre repainted."

Bondex Waterproof Cement Paint is used by the U. S. Government and in almost 100 foreign countries. For weatherproofing stucco buildings and waterproofing basements, Bondex has no equal.

#### SEND FOR NEW BONDEX BOOKLET

THE REARDON COMPANY (Address Nearest Branch) St. Louis, Mo. <sup>7</sup> Chicago, Ill. <sup>7</sup> Los Angeles, Calif.	AF. 10-3
Please send me copy of the new Bondex booklet, "Weatherproofing —Waterproofing the World".	
Name and Firm	
Name and FirmAddress	

#### PRODUCTS AND PRACTICE

(Continued from page 42)

heating of the attic, causing the house to cool off more rapidly in the evening, and providing the cooling effect of air movement.

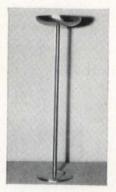
#### Air Conditioning Standards

So much confusion has resulted in the public mind due to the loose use of the term "air conditioning" that it has been found advisable to set up definitions for this and other terms used in air conditioning, and to recommend certain standards for design use. These definitions and standards have been put before the industry and have been endorsed by various societies, associations, and manufacturers. Substantially, air conditioning is defined as the process by which the temperature, moisture content, movement and cleanliness of air are maintained within definite, required limits. For purposes of public protection, these standards recognize apparatus which per form all of these functions (a) in winter, (b) in summer (c) in all seasons. An installation which does not perform all of these functions should be described only by the function performed, i.e., winter air conditioning. Neither a temperature control apparatus nor an air moving apparatus should be called air conditioning.

#### ILLUMINATION

Illuminating engineers have been recommending a higher degree of artificial illumination more effectively directed, a movement being popularized by "Better Light, Better Sight" programs. This has been made economically and esthetically possible by light sources of various shapes and high efficiencies







LIGHTOLIER LAMPS

combined in attractive fixtures with well designed reflectors and diffusers. Such improvements in the design of portable units have considerably increased their use. These units often combine both direct and indirect lighting and in many rooms entirely replace fixed units.

#### Daylight Lighting Unit

A self-contained lighting unit manufactured by the General Electric Vapor Lamp Co., has color characteristics said to approach actual daylight more closely than any commercial light source heretofore available. Known as the "circular mercury-incandescent," the light consists of a unit in which a circular mercury-vapor tube and an incandescent lamp are combined beneath one reflector to provide the desired spectral balance through a blending of the blue and green light rays of the mercury-vapor tube with the excess red of the incandes-

(Continued on page 128)

### QUEEN MAGGIE OF LURATANIA

rids self of SCRATCHITUS\*



"I've installed Venus Pencils in all my palaces," she cables — collect.

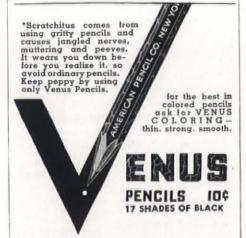
NOW another famous American product has been received regally in one of the lesser courts of Europe. Another triumph for democracy!

Her Royal Highness, Queen Maggie, as her beloved ignoramuses call her, searched the whole world over for gritless pencils, testing them in her own laboratories and now gives her Seal of Approval and royal warrant to Venus Pencils, made in far off Hoboken.

The Ceremony of Endorsement was an auspicious one (we had to donate 10 gross, but we dodged giving Maggie a suggested bejewelled platinum pencil). And our Emissary Extraordinary, Mr. Cohokus, delivered an oration about Venus Pencils, saying in part:

"Queen, you said a mouthful when you stated that 'Venus Pencils are smoothies'. They sure are gritless, Queen,—they never scratch."

The King, who looked on jealously and wanted to chisel in on the endorsing ceremony, was appeased by being given a Venus Pencil with an extra erase.



 This advertisement appears in Collier's and Time.

If the advertisement at the left were addressed to <u>you</u>, instead of the general public, its approach would be different.

Architects and engineers don't need to be told about smoothness.

Accurate grading is the Venus Superiority that interests professional men. Every pencil in each of its 17 shades of black is always identical.

This uniformity—insured by costly processes and elaborate supervision—has won first place for Venus Pencils—the largest selling quality pencils in the world.

Venus Pencils are also made in Toronto, Canada, by the Venus Pencil Company, Ltd., and in London, England, by the Venus Pencil Company, Limited.

AMERICAN PENCIL CO. HOBOKEN, N. J.



## The Skylines of America's



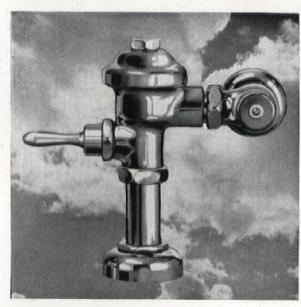
### Greatest Cities Are Made



## Up of Buildings Equipped



## with Sloan Flush Valves





SLOAN VALVE CO.

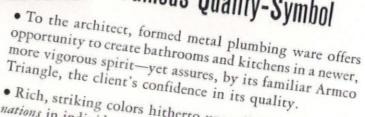
\_\_\_\_Chicago\_\_\_\_

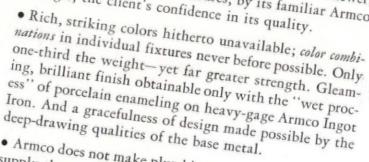


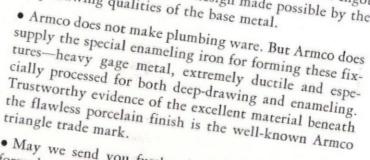
# LEFRESHING DESIGN AND COLOR



## Backed by this Famous Quality-Symbol

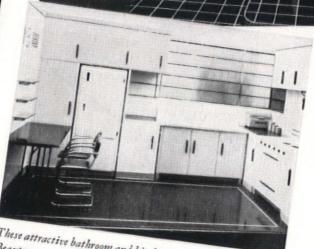




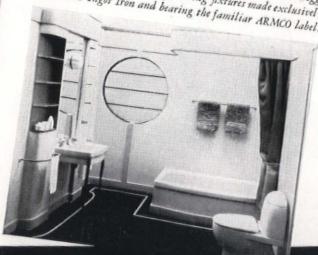


• May we send you further information on this new, formed metal plumbing ware and its possibilities in projects now on your boards? Simply address:

THE AMERICAN ROLLING MILL COMPANY EXECUTIVE OFFICES: MIDDLETOWN, OHIO

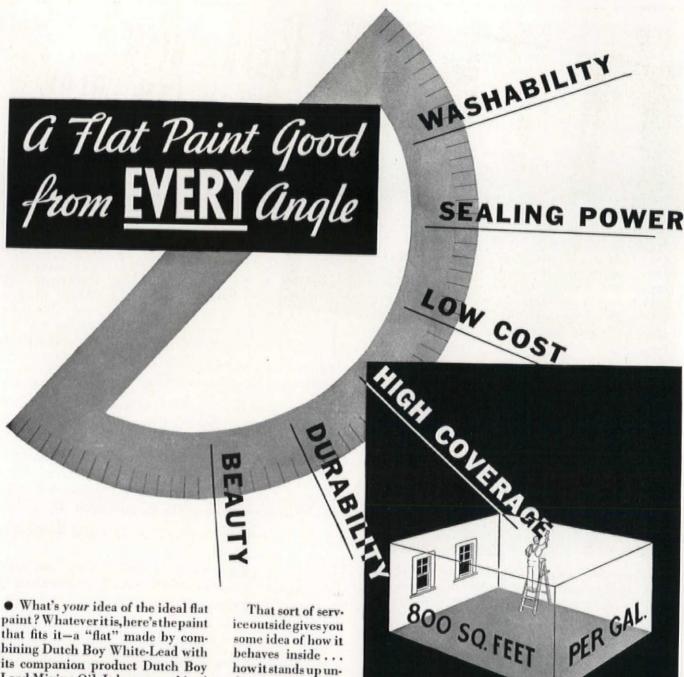


These attractive bathroom and kitchen arrangements show Briggs Beautyware—formed metal plumbing fixtures made exclusively of ARMCO Ingot Iron and bearing the familiar ARMCO label.



# ARMCO INGOT IRON

ANAME KNOWN TO MILLIONS



paint? Whateveritis, here's the paint that fits it-a "flat" made by combining Dutch Boy White Lead with its companion product Dutch Boy Lead Mixing Oil. It has everything!

First of all, it has the high coverage typical of a white-lead "flat." A gallon is good for 800 square feet on smooth plaster.

On top of high coverage it has great durability. So great, in fact, that it is extensively used for painting concrete, stucco and brick exteriors, which it seals as well as finishes. It takes all the punishment the elements can give, defying the weather year after year.

That sort of serv. iceoutsidegivesyou some idea of how it behaves inside . . . how it stands up under repeated washingandothersevere use. Also, it can be washed completely clean even after

being ink-stained, pencil-marked, grease-smudged or defaced with shoe-blacking and mercurochrome.

Other advantages of Dutch Boy White-Lead and Lead Mixing Oil paint are the following: It has all the richness, solidity and depth characteristic of a white-lead finish-a paint

beautiful enough for the finest interiors. It has excellent sealing power, stopping suction and hiding firecracks. And its high coverage, added to its quick mixing and easy spreading, makes it low in first cost, while its long wear and easy cleanability make it low in cost per year.

## DUTCH

WHITE-LEAD & LEAD MIXING OIL



#### NATIONAL LEAD COMPANY

111 Broadway, New York; 116 Oak Street, Buffalo; 900 W. 18th Street, Chicago; 659 Freeman Avenue, Cincinnati; 1213 West Third Street, Cleveland; 722 Chestnut Street, St. Louis; 2240 24th Street, San Francisco: National-Boston Lead Co., 800 Albany St., Boston: National Lead & Oil Co. of Pennsylvania, 316 Fourth Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Philadelphia.













Housing received distinguished attention in the books of the year, both here and abroad. Julius Hoffmann of Germany has continued to bring out the beautifully drawn and printed studies of the International Housing Association; Slum Clearance and The Equipment of Small Dwellings being the most recent. The late Werner Hegemann's book, City Planning and Housing, was a most provocative treatise on the disparity between housing practice and the democratic tradition. Not particularly technical, the book left this phase of the subject for a later and larger work. Slums and Housing by Dr. James Ford, an investigation of housing conditions in New York, primarily, stands out as fine scholarship and clear, dispassionate thinking. Books on small houses appeared in huge quantities, reflecting the apparently insatiable public appetite for this sort of thing. Most complete of these was Simon and Schuster's The 1936 Book of Small Houses, which shattered all precedent by making the non-fiction best-seller lists. An English book, The House, is a study of the history of houses, an eloquent

plea for the use of sense in the design of our homes today. Another English book, Raymond McGrath's Twentieth Century Houses, is a most complete collection of modern domestic work all over the world, with brief biographies of the men who built them. For the most complete compendium of modern architecture in existence, Italy takes the palm with Alberto Sartoris' Gli Elementi dell'Architettura Funzionale, a mammoth work and a most useful one. The series published by Ulrico Hoepli of Milan on various building types has continued, and the latest, Teatri, has just appeared. Another work of interest from this publisher is Architetture Luminose, a collection of examples of modern lighting. Industrial Architecture, published by the London Studio, should be seen by every American architect and industrialist: it is almost time that the country woke up to the fact that factories are architecture. The list can be continued at some length: there have been several good histories, some excellent biographies, a steady flow of technical books of all varieties. A bibliography follows.

#### BIBLIOGRAPHY

#### GENERAL

THE HOUSE: A Machine for Living In, by Anthony Bertram. A. & C. Black Ltd., London. 115 pp. illustrated. 71/4 x 91/2. 5s.

"A Summary of the Art of Homemaking Considered Functionally," it is an appreciation of the modern house as a return to sound architecture, and an historical study of the house as a functional expression of certain activities at various times.

ARCHITECTURE IN THE BALANCE, by F. E. Towndrow. Frederick A. Stokes Company, New York. 182 pp., illustrated from photographs. 5½ x 7¾. \$2.50. Mainly for the layman but not without interest and profit to the architect.

GLI ELEMENTI DELL'ARCHITETTURA FUN-ZIONALE, by Alberto Sartoris. Ulrico Hoepli, Milan. Second Edition, completely revised. 579 pp., 687 illustrations. 9 x 11. 200 lire.

The most impressive collection of modern architecture as yet brought between two covers. The book contains 500-odd pages of illustrations of representative buildings in almost 30 countries.

A SMALL HOUSE IN THE SUN, by Samuel Chamberlain. Hastings House, New York. 96 pp., 9½ x 12½. \$4.00. An excellent collection of photographs, with a brief text,

selected to catch the distinctive but peculiarly elusive spirit of New England.

ART IN THE U.S.S.R. Edited by C. G. Holme. The Studio Publications, Inc., New York. 137 pp., about 100 illustrations of which six are in color.  $8\frac{1}{4} \times 11\frac{1}{2}$ . Paper \$3.50, cloth \$4.50.

An attractively printed and illustrated survey of the arts in Soviet Russia, dealing with architecture, sculpture, painting, theater, cinema, and handicrafts.

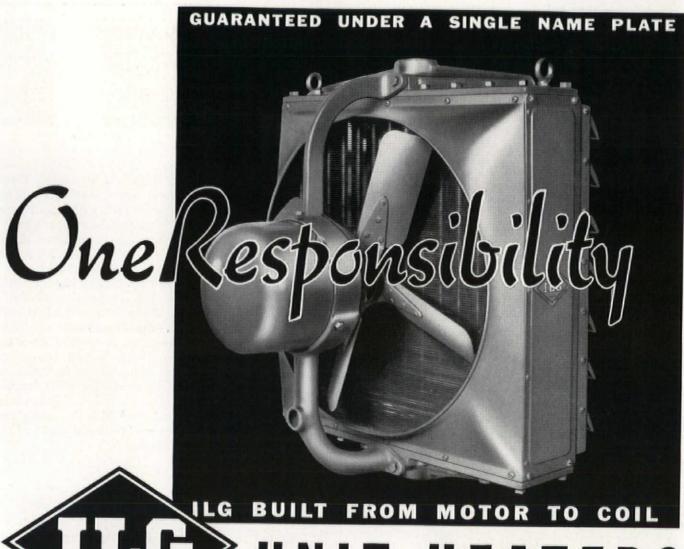
ART IN THE WESTERN WORLD, by David M. Robb and J. J. Garrison. Harper & Brothers, New York. 708 pp., illustrated. \$4.00.

A survey of architecture, sculpture, and painting, with the main emphasis on historical development, materials, and technique as exemplified in the major works.

THE EVOLVING HOUSE, VOL. III: RATIONAL DESIGN, by Albert Farwell Bemis, The Technology Press, Cambridge. 625 pp., 110 illustrations. 9½ x 6½. \$4.

The final in a series of three books on the house, this book deals with the application of modern production methods to the structure. It is a most comprehensive and intelligent survey of the pioneering efforts in housing and is one of the most forceful arguments yet advanced for the application of our production methods to the industry that is in the greatest need of them.

(Continued on page 140)



UNIT HEATERS

● There is no division of responsibility when you buy or specify Ilg Unit Heaters. One guarantee covers the complete unit — a single nameplate insures entire satisfaction.

Built as a highly specialized product, the Ilg Unit Heater motor is especially engineered for high temperatures, plus the heavy duty requirements of unit heating; it is self-cooled—there's no possibility of over-heating—no "slow roasting" of the motor. Only Ilg Unit Heaters have this fully enclosed, self-cooled feature.

Find out why Kohler, Ford, Mack Truck, Eastman Kodak, Morton Salt, and hundreds of others recommend Ilg Unit Heaters to you. Sign and mail the coupon for the New Illustrated Ilg Unit Heater Book — a wealth of information for the man who pays the fuel bills.

ILG ELECTRIC VENTILATING CO. 2899 NORTH CRAWFORD AVE., CHICAGO, ILL.

Ilg Electric Without obli	Ventilating gation send	Co., us a	2899 сору	North of the	Crawford New Illustr	Avenue, ated Ilg	Chicago, Unit Heate	Illinois r Book.
Name	A TABLE							





# NO MORE CONDENSATION! NO MORE FROST!

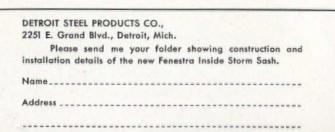
### New Fenestra STORM SASH and CASEMENT WINDOW combination Insures Clear Glass

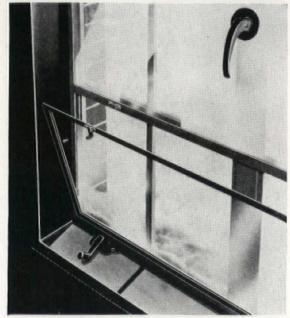
Attached to the Fenestra Casement on the inside, the new Fenestra Storm Sash seals the window opening tight. The combination forms a double window, and the dead-air space between glass lights provides effective insulation. It eliminates condensation and frost under all ordinary conditions (70° inside temperature, 45% relative humidity; 5° below zero outside temperature). Also it reduces the heat loss through the window approximately 60%, diminishing the load on the heating plant.

Factory built and fitted, Fenestra Storm Sash are attached quickly and safely from the inside, replacing Fenestra Screens in winter. They do not warp, swell, shrink or stick.

#### FOR AIR-CONDITIONED HOUSES

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Fenestra Inside Storm Sash with Tilt-in Ventilator at the sill.





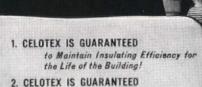
Fenestra Inside Storm Sash with Fixed Lights. Cross-section shows type with Tilt-in Sill Ventilator.

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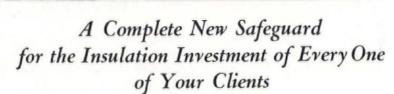
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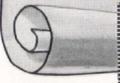
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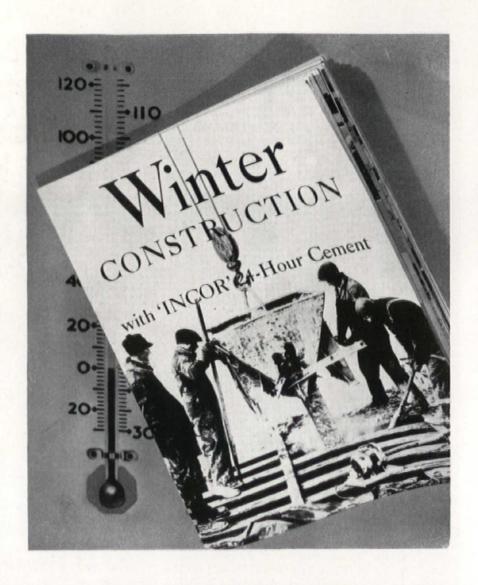
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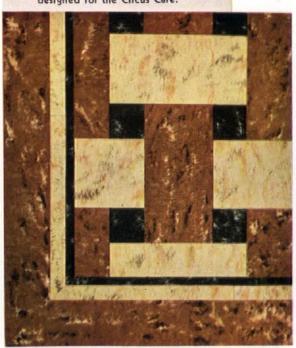
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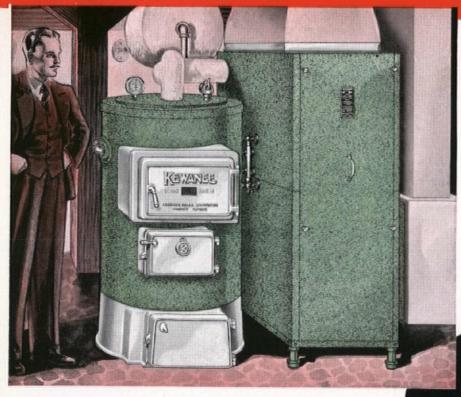
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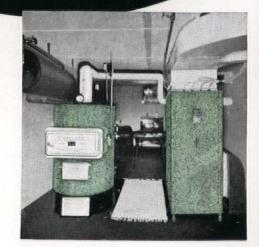
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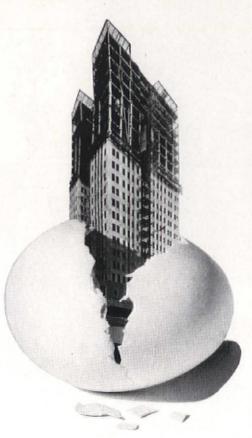
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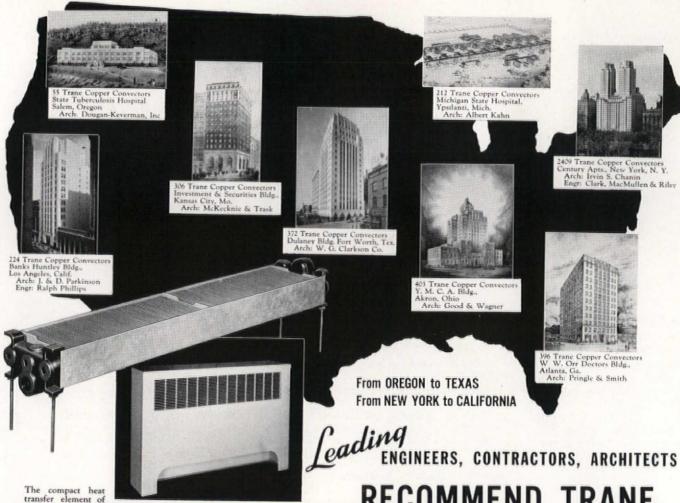
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This month The Architectural Forum turns its Letters column inside out. Instead of printing miscellaneous correspondence, the Editors present the answers to nine questions addressed to representative Americans. The questions, while wholly concerned with building problems, were sufficiently broad to permit competent opinion by leaders without as well as within the building field. To introduce the questions we quote from the letter which accompanied them. "Everyone condemns Building—condemns its backwardness, its awful complexity, its lack of standards of value, its high costs.

"Obviously that is an unhealthy attitude for the public to hold toward any industry and most particularly toward its Number One industry, one which directly affects the conditions under which every man, woman and child in the United States lives and works.

"In recent months much has been said and published about things which are wrong with building. But while its critics have been voluble, its saviors have not.

"Certainly, it is too much to expect that any one mind can examine this Mastodon, correctly diagnose its ills and prescribe an all-effective remedy. But it is not too much to expect that thoughtful, competent men should examine building minutely and from such study propose ideas, the sum total of which might be integrated into a working program."

#### PARTICIPATING IN THIS SYMPOSIUM:

Henry Bruere, President, Bowery Savings Bank; John Ely Burchard, Vice-President, Bemis Industries, Inc.; Stuart Chase, Economist-Author; R. M. Cheseldine, Executive Secretary, Committee for Economic Recovery; Karl T. Compton, President, Massachusetts Institute of Technology; Miles L. Colean, Deputy Administrator, Federal Housing Administration; Harvey Wiley Corbett, Architect; James Couzens, U.S. Senator; Andrew J. Eken, Vice-President, Starrett Brothers & Eken, Inc., Builders; Dr. James Ford, Harvard University; J. André Fouilhoux, Architect; Mayor Daniel Hoan, Milwaukee; Horatio B. Hackett, Assistant Administrator, PWA; Joseph Hudnut, Dean, School of Architecture, Harvard University; Albert Kahn, Architect; H. L. Mencken, Critic; Lewis Mumford, Critic; Herbert U. Nelson, Executive Secretary, National Association of Real Estate Boards; LeGrande W. Pellett, President, U.S. Building and Loan League; Hugh Potter, President, River Oaks Corporation; Waverly Taylor, President, Waverly Taylor, Inc.; Walter Dorwin Teague, Industrial Designer; Lowell Thomas, Commentator; Norman Thomas, Socialist; Roy Wenzlick, President, Real Estate Analysts, Inc.; William Allen White, Editor, Emporia Gazette; Ray Lyman Wilbur, President, Stanford University; and several others who prefer to remain anonymous.

#### 1. BUILDING CYCLE.

Question No. 1, appropriately enough, dealt with the most important problem facing the building industry today: Building's violent fluctuations in volume. Three remedies were offered for consideration: 1. "Systematic compilation of national, sectional and local building inventory figures to stimulate building where needed, check it where not needed," 2. "A scientifically planned public works program to flatten the valleys in the building cycle," and 3. "Federally controlled building finance rates which go up and down as circumstances demand."

More than a third of those answering this question felt that all three of the proposals were valid. Even this was not enough for Stuart Chase who suggested "Outright government subsidy as in Europe, for low-income groups." Socialist Norman Thomas felt that we must "abolish private landlordism" in order to solve our "general problem." Colonel Hackett expressed a more conservative view:

"It is my opinion that a scientifically planned public works program would tend to regulate fluctuations in the building industry. Likewise, governmentally sponsored financing operations at controlled rates of interest would have the same effect. In order that these methods may be effective, research and compilation of data is necessary."

A middle group endorsed the first two proposals, but did not believe that the third (Federally controlled building finance rates) was feasible. Said Miles L. Colean, FHA's Deputy Administrator:

"The Federal government can check unreasonably high rates and charges, as through FHA, but it would have as much difficulty in controlling the price of money as the price of wheat."

LeGrande W. Pellett expressed much the same view:

"The idea of Federally controlled building finance rates shows an utter lack of understanding of what causes building booms and lags. It would be just as sensible to expect great results from Federally controlled brick prices or mechanic's labor."

A slightly smaller group of those answering the question felt that only the first proposal (systematic building inventory) was feasible. This group was suspicious of "government interference" in the building business. H. L. Mencken put it this way:

"I am in favor of the first of your three schemes. I have a great distrust of building plans made by public agencies. Almost invariably they fall into the hands of quacks. I believe that Federal control of building financing would be even worse."

Roy Wenzlick, who publishes the \$75-per-year Real Estate Analyst, felt that proposals 2 and 3 wouldn't work:

"The difficulty with a scientifically planned public works program to flatten out the valleys in the building cycle seems to me to be the inadequacy of even a major program to compensate for the lack of volume ordinarily furnished by private interests.

"I doubt the advisability or possibility of controlling building finance rates in any way other than by the law of supply and demand. When the money is being furnished through so many competitive sources the interest rate will depend on the competition in the market."

Thus the composite opinion of the group was strong for "systematic building inventory" and a two-thirds majority favored "scientifically planned public works." Only a third, however, favored the proposal for Federally controlled building finance rates "which go up or down as circumstances demand."

#### 2. BUILDING CODES.

The Forum's second question dealt with revision of present building codes. It was proposed that "the Bureau of Standards or some other qualified, non-commercial body develop new codes which recognize proven new techniques and that these codes be offered municipalities for adoption." It was asked whether this was a workable proposal and whether the correspondent favored it.

With the exception of one unknown writer who answered: "No. Most decidedly," everyone seemed to favor this proposal. The closest thing to opposition came from Dean Hudnut, who felt that:

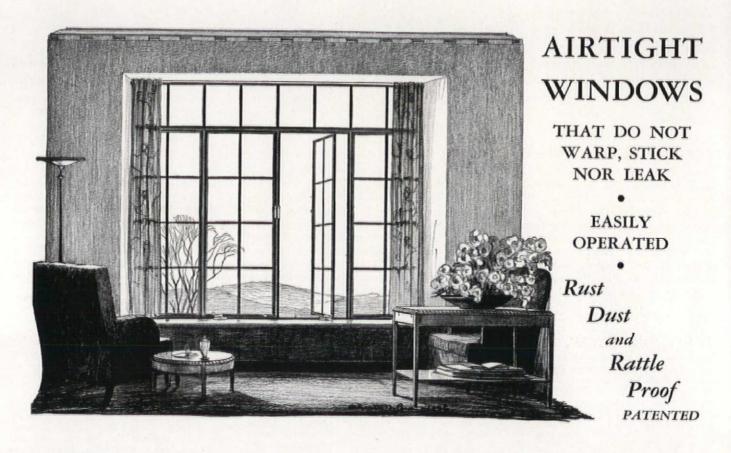
"The standards should be those arrived at by a competent jury of architects—a permanent jury, so that revisions and appeals may be facilitated."

Many correspondents, while endorsing the plan, pointed out practical difficulties and objections which would have to be met. Andrew J. Eken emphasized the role of labor:

"While undoubtedly a great benefit would accrue from a study of this problem by the Bureau of Standards, I doubt

(Continued on page 64)

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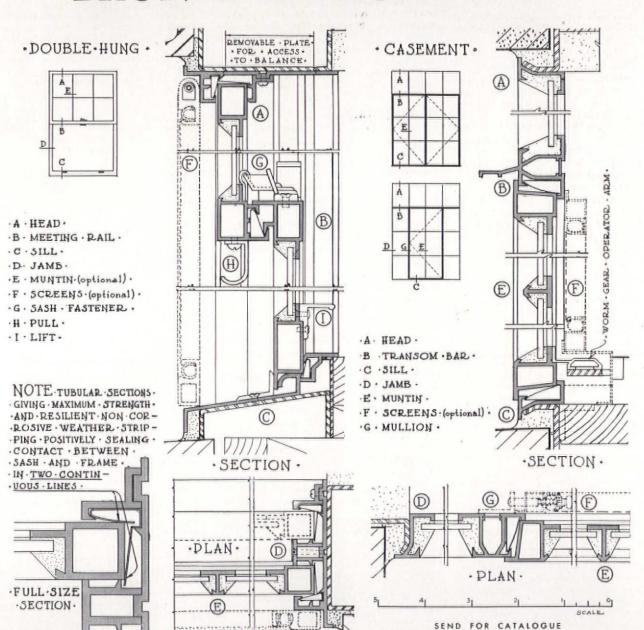
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#### LETTERS

(Continued from page 61)

very much if any substantial progress will be made until some closer approach is effected between the industry as a whole and labor . . .

Some feared politics, a leading producer of building materials pointing out that:

"The suggestion is good only if proven authorities are permitted to make the changes in the accepted practice as laid down by building codes throughout the

Many emphasized the fundamentally local ature of the problem. John Ely Burchard nature made the most constructive proposal:

. [Local codes] might . . . merely specify that, for given uses in buildings in the community, materials and methods of construction should pass tests, to be established by judicial bodies such as the Bu-

reau of Standards

"Recognizing that there are somewhat different problems in different sections, as for example need for greater wind bracing here and higher degree of earthquake resistance there, there might be a number of classifications in the central code Individual municipalities then would, in accordance with their own zoning requirements and their own problems, state what the lowest category was the use of which would be permitted in any given situation

#### 3. TAXES.

Real estate men everywhere agree that one problem is of fundamental importance: taxes. Specifically, question No. 3 dealt with current proposals to recast our tax base on the English model—taxes based on actual income from property rather than on theoretical property

Those answering the question almost unanimously approved the English method. A single dissenting voice was heard from Senator James Couzens, who voted nay, but Presidential Candidate Norman Thomas said yes—with reservations. Some advised caution:

"Such a departure is a matter which should be approached with extreme care. The debatable question still remains as to whether a tax on real estate is as much of a building deterrent as is commonly supposed." A Midwest industrialist who pre-

fers to remain anonymous.

"The general property tax needs restudy and correction and the English system should be examined critically with a view to possible adoption. But all reasonable alternatives which will produce the needed revenue should be examined.

Professor James Ford.

"It sounds good, but will need careful study." From Chicago.
"I believe in recasting our tax base so far as it affects improved real estate. There might be something in the Henry George theory. I have hoped to see it tried for forty years." William Allen White.

Some doubted if such a change was possible, however desirable it might be. Again John Ely Burchard contributed the definitive expression:

"There seems no question but that the English system is much better. I would favor having our taxes on this basis . . .

It is not easy to see any transition road which would carry us from our present method to the other, so on the whole it looks like wishful thinking."

Liberals were quick to seize on the broader implications of the proposal. Said Writer Mum-

I strongly favor the English system; and I would reenforce it by imposing a steep tax on speculative appreciation of values

Perhaps Architect Fouilhoux hit on the reason for the unanimity of opinion on this question in his realistic comment:

"It appears that during booming times many real estate dealers and property owners do not dislike the idea of taxes based on valuations and are not adverse to excessive valuations which justify sales at exaggerated prices. When times are bad and properties bring little or no income they favor the English system. . .

#### 4. FINANCING.

Pointing out that U.S. financing for houses is, next to France, the most expensive in the world, it was asked if down payments, interest, amortization periods could be safely liberalized.

About one-third of those answering opposed, vo-thirds favored liberalization. Some betwo-thirds favored liberalization. lieved even current rates too liberal:

"Judging from past experience should say that present financing of building in the United States is at too liberal rates rather than otherwise for the safe investment of capital. After all, sound financing of the industry must be based on safety of capital invested there just as in sound financing of any other type of business." LeGrande W. Pellett.

"In the matter of individually owned houses, I feel that a mistake is now being made in the extending of such large percentage mortgages as is now contemplated where the percentage of value represented by the mortgage runs 80% or over. It is likely to bring about a condition where people embark on a project without enough at stake to force them to make the necessary effort to stay with the project in times when their income is perhaps somewhat reduced." Andrew J. Eken.

Others, holding that financial terms accurately reflect risk, argued that if the industry took steps to reduce risk liberalized terms would result naturally. This was the view of R. M. Cheseldine:

"In time our loan rates and interest rates can be liberalized. On our present physical values, speaking generally, we should not be more liberal. Rates and charges depend upon the element of risk, and our building products, the finished structures, are not entitled to lower rates. However, as we standardize through integration and produce better products at less cost, we stimulate the desire to own. This reduces the moral risk which then entitles the buyer to the lower down payment and longer terms. As we increase our actual building in volume we increase employment. This likewise tends to decrease the risks. The better physical product combined with the reduced moral risk offers opportunity for reduced interest rates . .

Miles L. Colean felt that the FHA holds a

"Until the risk is lowered through improved building and developing practices, the money cost will remain higher than we like to see it. FHA mortgage insurance and appraisal procedure has helped in both respects and the results should be gradually cumulative.

#### 5. WAGES.

"The cost of skilled building labor is out of line with skilled labor in other industries, thus penalizing the home buyer whose per hour wages are substantially less than those paid the labor which builds his house." Would lowering labor's hourly wage increase volume sufficiently to "warrant a change in labor's at-titude?" Or would labor require a guarantee of increased annual earnings before consenting to such a reduction? Or will labor refuse to con-sent to reductions in any event, thus forcing more and more prefabrication?

Only about half of those answering other questions expressed an opinion as to whether reduction in wages would result in a sufficient increase in volume to warrant a change in labor's attitude. These were about evenly divided Yes and No. Lowell Thomas, commentator, said, "I doubt it." An unknown from Chicago said, "Not now, would have 3 years ago." A separate group contended that build-A separate group contended that building trades wages were not high. In this group were Andrew J. Eken, Roy Wenzlick, and Architect Kahn; people who should know. Said the last:

"We think no good purpose would be served by reducing the rate of wages in the building trades. Owing to the loss of time on account of inclement weather the average annual wage of skilled building labor, even at the high rate, is not out of line with that of skilled labor in other fields."

Roy Wenzlick thinks we face a shortage of skilled labor which will jack wages up, because the "cessation of building has been so long and so complete."

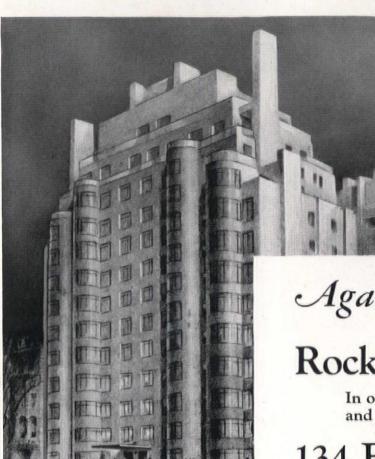
Not many answered the second part of the question, and of those who did only a very few felt that labor would accept lower rates in exchange for a guaranteed annual wage, although more felt that labor should. A larger group, however, felt quite definitely that the deal was off, that labor would refuse the proposition even if there were someone in a position to make it.

Most of the correspondents refused to accept the implication of the third question, and instead embarked on their own analysis of the situation. We are able to print only a few of these, representing typical points of view. This is R. M. Cheseldine's, not Candidate Thomas', analysis:

"What labor will or will not do is an academic question at present. Admitting the success of the C.I.O. movement, [Labor's Committee for Industrial Organization] there will be created a 'home building union'. This will provide an opportunity for a readjustment of many labor questions. If you couple such a union with the 'integrated industry' operating through an association of strong building companies, the matter of a guarantee of annual wage can be solved.

"Failing C.I.O. operation and the association of large building companies, the trend will undoubtedly be toward greater factory prefabrication . . .

(Continued on page 114)



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# OF 1936

There are 105 new buildings in this issue of The Forum. Among them they represent almost every current type of architecture, from a sewage disposal plant in Cleveland to an old ladies' home in Hinsdale, Ill., from a house in a desert for Cinema Director Von Sternberg to a swimming pool for 4,000 in the Bronx. Such a collection cannot help but reveal, if only by its numbers, many a fact about this year in architecture. By their arrangement of the material the editors intend to bring out others.

To begin with, the last twelve months have witnessed nearly twice as much construction as have any others in the last four years. This rise of new building to meet new demands stands so cleanly by itself that it presents an excellent opportunity for statistical analysis. Numerically, that study has been laid out for you on the next two pages. Graphically, the same facts have been suggested

## ESTIMATED TOTAL VALUE OF ALL

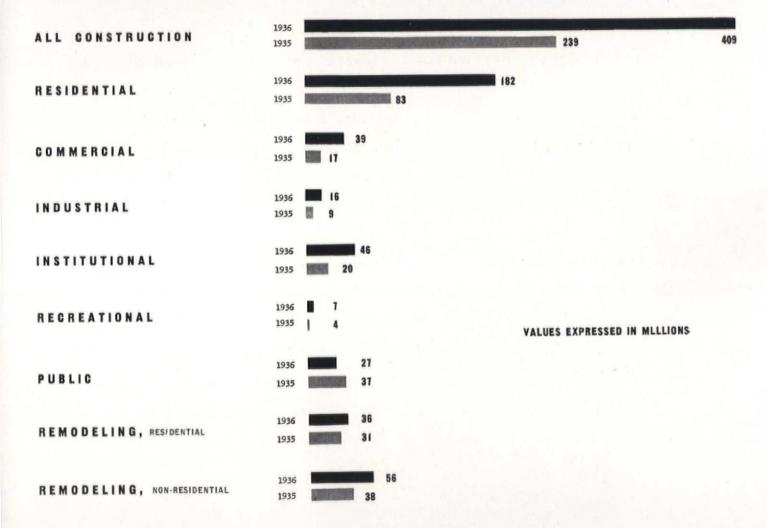
ALL CONSTRUCTION RESIDENTIAL COMMERCIAL INDUSTRIAL INSTITUTIONAL RECREATIONAL PUBLIC REMODELING, RESIDENTIAL REMODELING, NON-RESIDENTIAL

## U. S. BUILDING FOR THE YEAR 1936\*

1960 MILLIONS

860 MILLIONS

### ACTUAL CONSTRUCTION IN 94 LARGER CITIES FIRST SIX MONTHS 1935-1936 \*\*



Charted here is The Forum's October forecast of what the 1936 U.S. building total will be. The forecast is developed from the Department of Labor's record of building permits in urban centers. The estimated total represents an increase of approximately 70 per cent over 1935. The Department of Labor's record of public buildings and public works includes only buildings proper, excludes dams, bridges, roads, and similar projects.

The well-advertised upswing of 1936 building, though far above recent levels, totals less than half the volume recorded for the mid-Twenties. This chart compares the volume of building during the first six months of 1936 with the volume during the first six months of 1935 in 94 cities of more than 100,000 population. The chart is derived from the Department of Labor's record of building permits.

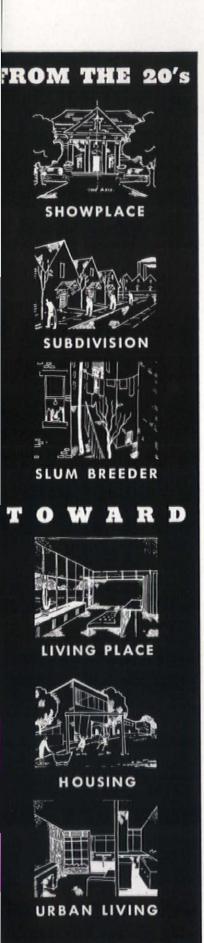
in this issue by apportioning to each building type an amount of space roughly commensurate with its percentage in the construction total for the year.

Five years of no building has not meant five years of no thinking. It has, as a matter of fact, meant an occasion for an unusual amount of thinking, a point which will presently be made plain when you begin reading this issue. Most of the thinking has been directed toward the concepts which underlie architecture, and some of the thinking has managed to reach through to stone and steel. And in stone and steel these new ideas have produced forms which are new and arresting, and sometimes beautiful. To help you realize how new, how arresting, and how beautiful these 1936 structures are, there have been inserted along with them a few scenes and thoughts culled from the Twenties. The progress is measurable.

This collection of buildings serves also to mark a minor epoch: Modern architecture has attained its majority. The fact is celebrated again and again in the articulation of the plans, in the direct lines of the designs, and in the valid choice of materials to be observed in the pages that follow.

And the fact is finally celebrated by the Skyline of 1936. Beyond that Skyline still lie for Tomorrow prefabrication and Government housing and integration and the problems of Labor. For Today, let this issue of The Forum speak.

# residential



Rugged Individualism changes the primary conception of the HOUSE as a SHELTER to that of the HOUSE as a SHOWPLACE, and speculators still capitalize on the advertised theory that the home is a monument in direct proportion to the wealth of its owner. All is translated to the prototypes of luxury, in adroit adaptations of styles, and nowhere is there consideration for life and the needed mechanical devices and materials, which would demand a new approach.

The Tempestuous Twenties give new meaning to the word subdivision. Caught in the maelstrom of uncontrolled expansion, housing fraternizes with land booms and flashy advertising. Real Estate becomes tinted by devious business methods. The blighted area emerges from these schemes of collective shelter, which involve only the deadly repetition of jerry-built houses.

The efficiency of an apartment plan depends entirely upon the incorporation of all the supposedly necessary elements of room and circulation into the smallest possible space. From this concept a typically indigenous vocabulary evolves, made up of such terms as: kitchenette and dinette, while the folding bedrooms and other space-saving devices identify themselves with the daily life of the apartment dweller. High land values create a change in the standards of city-living, so that the inter-relationship of uses demanded of various plan units cannot be made to fit into the stiff and uncompromising forms of existing buildings.

Designers of shelter become mindful of the opportunities in Designing for Living. In contrast with the former tightly fixed plan, contemporary designs show a definite tendency toward the interlocking of elements—THUS, THE LIVING SPACE INCLUDES BOTH THE IN- AND THE OUT-OF-DOOR—kitchens are no longer relegated into shapeless remnants of plans, while porches, dining rooms, and alcoves are now in intimate relationship with the once segregated and austere living room. The garage, once a luxury, becomes a necessity in the smallest of homes. The architect becomes the spokesman for a nomadic and practical generation.

Specialists in landscaping, financing, city planning, and engineering, with the architect and federal and municipal authorities, become professional agencies working toward the elimination of slum areas. The primary factors which determine the ultimate architecture of housing the people are: their needs and habits, the rent they can pay, the financial set-up (whether private or public), and the location.

Plans suggest an intelligent effort in interlocking the various functional requirements. A visual impression of spaciousness is achieved through the ingenious use of mirrors, colors, low units of simple design, increased glass areas, and built-in units. Efficient mechanical equipment make up in comfort what these apartments lack in size. The hotel enters in competition with the apartment building, by incorporating single rooms into suites and small apartments rented on long-term leases. The vast lost cubage formerly dedicated to dining hall and public rooms becomes the income-producing intimate bar, the restaurant opened to the street, the cocktail lounge, and the shops.

HOUSES

Increased construction activity during 1936 gave building its long-awaited opportunity to test public acceptance of the new ideas and techniques which have appeared in isolated houses since 1929. The spearhead of change has been the desire for comfort and economy.

EXTERIORS

The Modern approach, which was little known and less respected in America prior to 1929, has definitely won its place in the skyline. Though it shows no signs of becoming an immediate dominant type, examples of the Modern house are to be found in almost every one of the 48 States. Its major importance today is the effect it has had upon traditional style. A public not yet ready to go the whole way likes sun-decks, corner windows, smooth wall surfaces, simplicity. Note a tendency toward these features in otherwise conventional patterns. Always appealing to a strictly limited audience, the Regency house and the house which suggests a reconciliation of Regency with Modern is becoming significantly more prominent. Similar vitality is discernible in other forms of Eclecticism and in manifestations of local and original designs. But the typical 1936 American house is definitely Colonial, with some variations on the motif which stems from the Thirteen Colonies. The ascendancy of the Colonial parallels less activity in what might be called imported styles, the English and Norman cottage, the French chateau, and Spanish Mission-house.

PLAN

Economy means more use per square foot. Comfort means space disposed for convenience. There is a trend in both directions; its obvious manifestation is the open plan, its obvious spur is the demand for accommodating rapidly developing mechanical equipment. Provision for the preparation of food, sanitation, and house cleaning now belong to the architectural shell; therefore, heating equipment, kitchen cabinets and fixtures, and bathrooms have been thoroughly integrated in the more successful residences. Random closets, breakfast nooks, butler's pantries in maidless houses, dens, and two-door baths are on their way out. Dining rooms are getting smaller, more intimately related to other living areas, or entirely abandoned. Kitchens and garages are moving toward the street and houses are becoming orientated for outdoor living in the rear where privacy and safety for children is more possible. Cellars persist even where they are not needed.

MATERIALS AND EQUIPMENT

Foreshadowing more universal air conditioning, there is a noteworthy emphasis on insulation. The public wants it; mortgage lenders agree. Termite-consciousness, particularly in infected areas, is evident. Kitchens and baths are the supreme sales feature. Garish decoration is in slow retreat. Electric outlets are counted in large double figures.

APARTMENTS AND OTHER MULTI-FAMILY DWELLINGS

Apartment construction today involves new elements motivated by the everlasting search for space-saving, in turn provoked by a combination of increasing land and building cost and demand for lowest possible rent. Space must provide for multiple use, and the dining room is therefore a luxury. Kitchens are compact and highly mechanized, with built-in shelves and cabinets emphasized. The swing toward built-in features continues for storage and closet space and basic items of furniture. Air conditioning equipment, maximum available exterior glass area, corner windows, with corresponding increase in usable wall space, and built-in glass shower stalls are conspicuous contemporary features. Decreased fire hazard results from floor surfaces of fireproof construction with embedded conduits. The open plan is clothed in restrained color, with Venetian blinds and veneered materials as decorative notes.

HOTELS

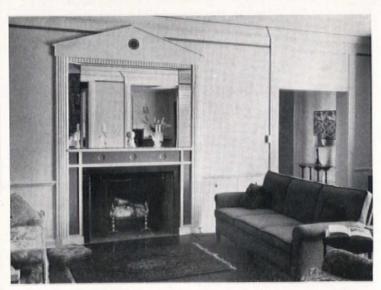
The existing oversupply of hotel structures has limited building construction activities in this field to extensive remodeling and relocating of component elements. Partial or complete installation of air conditioning, efficient kitchen equipment, and general redecorating are characteristic. Basic changes are confined to six zones. Lobbies, bars, cocktail lounges, restaurants and exteriors show a marked Modern influence. The conversion of excess bedrooms into apartment suites was an ingenious emergency measure which promises to survive.

## HOUSE FOR J. W. BRITTEN, MIDLAND, MICH., FRANTZ AND SPENCE, ARCHITECTS





R. W. Tebbs Photos

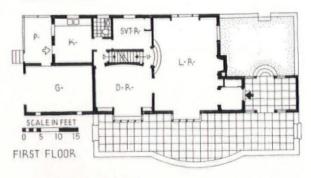


LIVING ROOM

PROBLEM: Simply to provide ample accommodations for two people and occasional guests. The clients imposed no set requirements, save in the matter of rooms.

Developments in residential architecture in the Middle West have been increasingly interesting during the past few years. Where previously most houses were tasteless adaptations of pretentious English half-timber and brick structures, there is growing up a new type of dwelling, easier to look at and live in. They display no recognizable style save for the slightly Classic detail on the interiors. Typical of this new trend is the house shown here. Plain in its outlines and exterior treatment, it relies for its effect on texture, fenestration, and landscaping. Cost (excluding architect's fee): \$14,400. Cubage: 31,496 at 451/2 cents.





#### CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls-frame construction, brick veneer and lath and plaster. ROOF: Wood frame roof boards and wood shingles.

SHEET METAL WORK: Painted Armco iron, The American Rolling Mill Co.

INSULATION: Outside walls—2 in. rockwool, U. S. Gypsum CO. Attic floor—4 in. rockwool.

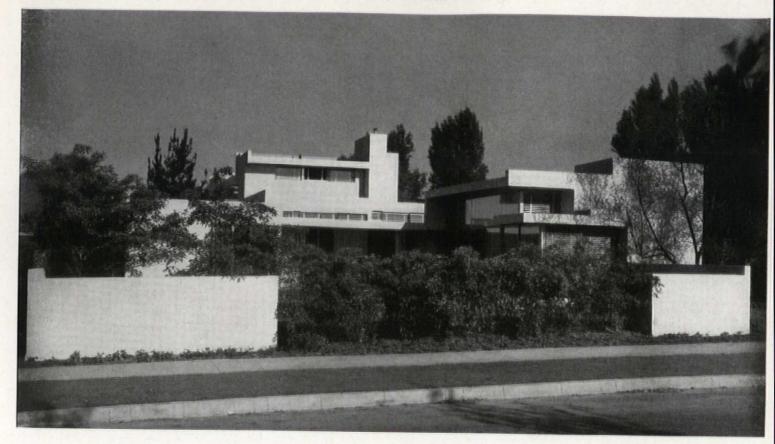
WINDOWS: Sash-white pine wood casements and double hung.

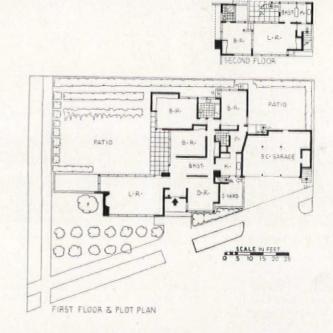
FLOORS: Living room, bedrooms and halls-Norway pine sub-floor, carpet covered. Kitchen and bathrooms -linoleum, Armstrong Cork Products Co.
ELECTRICAL INSTALLATION: Wiring

KITCHEN EQUIPMENT: Stove-gas. Refrig. electric. BATHROOM EQUIPMENT: All fixtures by Kohler Co. PLUMBING: Soil and vent pipes-extra heavy cast iron and galv. steel. Cold water pipe-steel. Hot water pipe-Anaconda tube and Mueller fittings.

HEATING AND AIR CONDITIONING: Warm air. Boiler—gas fired, Dailaire furnace with Brundage blower and filter. Hot water heater—Ruud Mfg. Co.

# HOUSE FOR J. J. BUCK, LOS ANGELES, CALIFORNIA





PROBLEM: To design a house which contains a separate apartment for relatives of the owner.

While the problem of providing accommodations for elderly parents or other members of a family is by no means uncommon, it is only infrequently that one finds it given consideration by architect or client. Here a solution has been found in the planning of a second floor apartment, complete in itself, with separate outside stairs in addition to those which lead to the owner's own quarters. Like all of Architect Schindler's work, this house is a strongly personal solution and anything but copybook "modern." The house opens on a private garden, and the large glass areas are shielded from the sun by overhangs. The living room, as shown by the photograph on the next page, is of unusual height, and on the garden side is glazed from floor to ceiling.

## R. M. SCHINDLER, ARCHITECT



ENTRANCE SIDE

W. P. Woodcock Photos



TERRACE

## CONSTRUCTION OUTLINE

### FOUNDATION

Walls—concrete. Cellar floor—cement. STRUCTURE

Exterior walls-stucco on wood frame, plaster finish inside. Floor construction-ready cast concrete joists, 2 in. T. & G. pine floor. Second floor—wood Joists.

Construction-wood joists covered with white finished composition roofing.

SHEET METAL WORK

Flashing, gutters and leaders—galvanized iron. WINDOWS

Sash—sheet metal, sliding, cadmium plated, architect's design. Glass—\(\gamma\_{16}\) in. thick. Screens—sliding. STAIRS

All stairs concrete. FLOORS

Living room, bedrooms and halls—pine, carpeted. Kitchen—linoleum. Bathrooms—tile.

WOODWORK

Trim and doors-pine.

HARDWARE

Interior and exterior—Schlage Lock Co.
ELECTRICAL INSTALLATION
Wiring system—conduit, Fixtures—built-in, direct and indirect.

HEATING

Gas furnace.

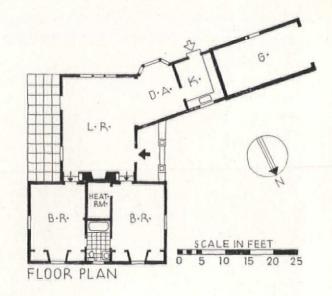
# HOUSE FOR MISS ELLEN A. DOCKERY, NEW CANAAN, CONN.



Gattscha Phatas

PROBLEM: To design a small house in a thickly wooded site, following the contours to avoid destruction of the natural rock formation, and saving as many trees as possible.

The unusual charm of this unpretentious dwelling is due in large part to its recognition of the possibilities and limitations of the site. The requirements of the owner were simple, including two bedrooms and very small dining and kitchen space. The large living room is combined in an interesting manner with the dining alcove, producing in effect one room of generous size, as well as solving successfully the awkward problem of joining the wing to the main body of the house. Detail on the exterior is crisp and in excellent scale with the house. The heating arrangement is of particular interest; since no excavation was done the heater room had to be located on the ground floor, and considerable economy was effected by placing it so that both bedrooms and the living room can be heated with a minimum of ductwork. Cost: \$7,480. Cubage: 14,100 at 53 cents.





NORTH ELEVATION



LIVING ROOM

## CONSTRUCTION OUTLINE

## FOUNDATION

Poured concrete waterproofing-Hot pitch on felt under first floor slab.

#### STRUCTURE

Exterior walls—Frame construction, shingle, sheathing. Inside partitions—Ecod lath and 3 coat plaster on wooden studs. First floor-4 in. concrete slab on gravel fill, wood tile floor laid in mastic, E. L. Bruce Co. ROOF

Construction-shingle lath covered with cedar shingles. SHEET METAL WORK

Flashing, gutters and leaders—copper. INSULATION

Outside walls and roof-Reynolds Metallation.

#### WINDOWS

Sash-wood, double hung, weatherstripped with Curtis Silentite. Glass-single thickness. Screens-outside, hung.

#### FLOORS

Living room and bedrooms-Bruce tile wood. Kitchen and bathrooms-linoleum.

## WOODWORK

Trim-Curtis stock; Oxford kitchen cabinets. Interior doors-6-panel Curtis. Garage doors-Curtis imitation plank.

#### PAINTING

Interior: Walls, trim and sash-lead and oil. Exterior: Walls and sash—lead and oil. KITCHEN EQUIPMENT

Stove-Universal Electric. Refrigerator-Frigidaire. Sink-Standard Sanitary Mfg. Co.

#### BATHROOM EQUIPMENT

All fixtures by Standard Sanitary Mfg. Co.

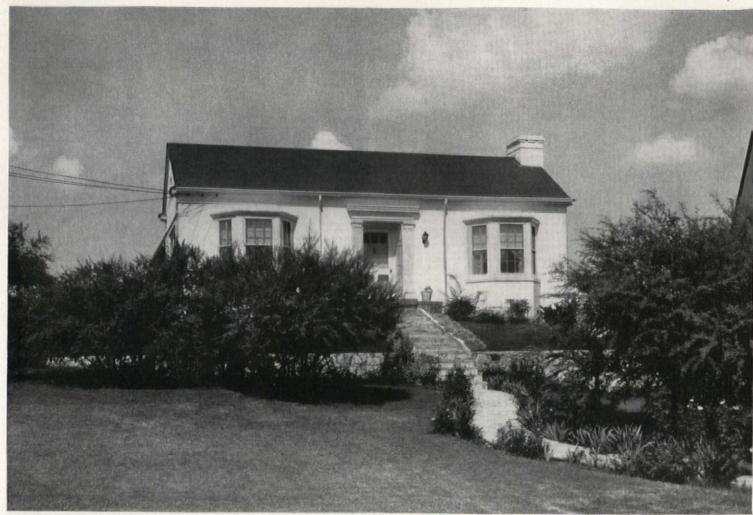
## PLUMBING

Soil and vent pipes-cast iron. Water supply-brass

## pipe and copper tubing from street. HEATING AND AIR CONDITIONING

Warm air including filtering and humidifying. Boiler— Scott Newcombe direct fired furnace with oil burner. Thermostat-Minneapolis Honeywell Regulator Co. Hot water heater-Westinghouse Electric & Mfg. Co.

# HOUSE FOR J. I. EDWARDS, SAN ANTONIO, TEXAS J. FRED BUENZ, ARCHITECT



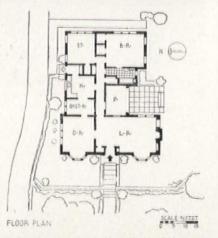
Harvey Patteson Photos



LIVING ROOM

PROBLEM: Accommodations for a family of two, with provisions for expansion of the house. Plan to take advantage of prevailing summer winds.

A strongly horizontal design, well adapted to the location. The house permits the addition of a future bedroom, bath, and game room. The two bays off the dining and living rooms were provided to take advantage of the view over the city. Cost: \$4,750. Cubage: 19,845 at 24 cents.



## CONSTRUCTION OUTLINE

STRUCTURE: Common brick veneer on frame.
ROOF: Construction—wood frame, sheathing and felt,
covered with blue black strip shingles, Certain-Teed
Products Corp.

SHEET METAL WORK: Flashing, gutters and leaders—26 gauge Armco, American Rolling Mill Co.
WINDOWS: Sash—yellow pine, double hung, cypress

WINDOWS: Sash—yellow pine, double hung, cypress sills. Glass—single strength, quality A, Libbey-Owens-Ford Glass Co. Screens—pearl wire.

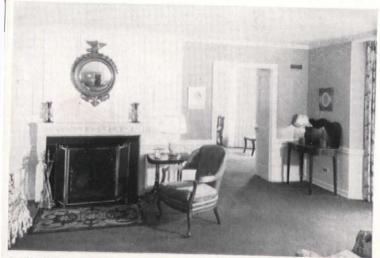
FLOORS: Select white oak. Kitchen-inlaid linoleum, Armstrong Cork Products Corp.

ELECTRICAL INSTALLATION: Wiring system—BX cable. Switches—flush toggle, Hart & Hegeman. KITCHEN EQUIPMENT: Refrigerator—General Electric Co. Sink—acid resisting, flat rim, Crane Co. PLUMBING: All fixtures by Crane Co. Soil and vent pipes—cast iron. Water supply pipes—galvanized steel. HEATING: Gas outlets in each room.

# HOUSE BARRINGTON, ILLINOIS, WHITE AND WEBER, ARCHITECTS



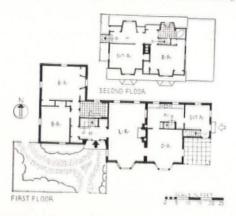
Hedrich-Blessing Photos



LIVING ROOM

PROBLEM: To provide accommodations for a family of four and a maid in a guest house, keeping it sufficiently small in scale not to compete with the main house.

An admirable solution; the house has great charm without any false picturesqueness. The masses are simple and well disposed. The main bedrooms are on the first floor, separated from the rest of the house by the entrance hall. Cost: \$16,720, Cubage: 38,000 at 44 cents.



### CONSTRUCTION OUTLINE

FOUNDATION: Walls-continuous concrete. Cellar concrete on cinders.

STRUCTURE: Brick Veneer on frame construction, rock lath and plaster.
ROOF: Wood rafters, boarding and cedar shingles.

SHEET METAL WORK: Armco 24 gauge iron, American Rolling Mill Co.

INSULATION: Outside walls—Spray-O-flake. Attic floor—4 in. Red Top wool, U. S. Gypsum Co. Weatherstripping-zinc interlocking.

WINDOWS: Sash-double hung, storm sash. Glass-

double strength. Screens—copper.
FLOORS: Living room and bedrooms—oak. Halls—brick. Kitchen—asphalt tile. Bathrooms—X-lte and

PLUMBING: All fixtures by Crane Co.
HEATING AND AIR CONDITIONING: Warm air heating with winter air conditioning.

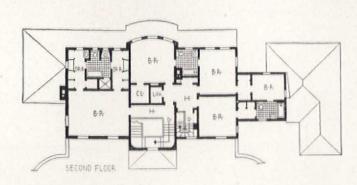
# HOUSE FOR R. S. LIEBIG, BEL AIR, CALIFORNIA



George D. Haig

This formal residence is the California counterpart of the brick and stone Georgian house in the East, and is typical of the freedom of design found in most modern California domestic work. Faced with pink stucco, with trim painted an off-white, the house, for all its formality, has great charm and an air of livability. To an unusual degree the design is free from affectation; the house has a definite character, which arises from the architecture; there are no meaningless trimmings. The porch is a deliberately playful touch, and its delicacy is well set off by the plain walls behind. Terraces surround the first floor almost completely, providing outdoor living facilities that nearly equal those of the house itself. The plan is unconventional in its arrangement of the stair hall and in the disposition of the major ground-floor rooms. Service rooms are in a separate wing, with the kitchen serving as the connecting link. A service yard is located between the servants' wing and the garage, and is screened by the high curved wall of the forecourt.

## ROLAND E. COATE. ARCHITECT



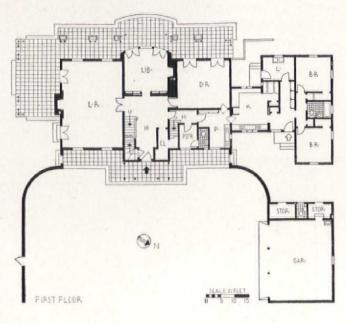


FERRACE

George D. Haight



LIVING ROOM



## CONSTRUCTION OUTLINE

#### FOUNDATION

Walls-continuous reenforced concrete. Waterproofing-emulsified asphalt on all external walls and Termite slab under entire house on unexcavated portions. STRUCTURE

Frame construction, stucco on chicken wire. Insidelath and plaster.

#### ROOF

Wood frame covered with 1/2 in. Royals, 5 in. to weather. SHEET METAL WORK

Flashing-16 oz. copper. Gutters and leaders-24 gauge, Toncan, Republic Steel Corp., or Armco, American Rolling Mills Co. INSULATION Plaster on Celotex lath.

#### WINDOWS

Sash—double hung. Glass—single and double strength, 1/8 in. polished plate. Screens—rolling in sill, full outside, half-sliding inside, Higgins Mfg. Co.

#### FLOORS

Living room and bedrooms  $1\frac{3}{16} \times 2\frac{3}{4}$  in, white American oak. Halls and dining room—brown Terrazzo with white border. Kitchen—linoleum, Bathrooms—rubber. WALL COVERINGS

Library—grass cloth. Bedrooms and bathrooms—paper. PAINTING

Exterior sash-2 coats of lead, zinc and oil, 1 coat of Vitralite.

#### ELECTRICAL INSTALLATION

Switches-P. & S. Despard type. Fixtures-Indirect over built-in cases and in ceiling of entrance hood, Arthur Clough.

#### PLUMBING

All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes—cast iron. Water supply pipe—galvanized iron, A. M. Byers Co.

## HEATING

Warm air gravity system, gas-fired.

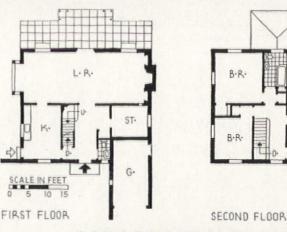
# OUSE FOR J. L. CONARROE, PHILADELPHIA, J. L. CONARROE, ARCHITECT





PROBLEM: To design a small house on a small lot, with good orientation for the main rooms, and a maximum of private outdoor space for the family.

The architect's comments are of interest: "I consider that any small house should be planned with service and garage on the front . . . I felt that for my own home it would be relaxing to have something different from what one could sell to a client, and in the square house there is more space and economy." Cost: \$9,800. Cubage: 27,807 feet at 35 cents.



#### CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls-common brick backed with used brick. Interior partitions-rocklath and plas-

ter on wooden studs.

ROOF: Shingles, 6 in. to weather.

SHEET METAL WORK: Flashing—lead covered copper. Gutters—fir. Leaders—copper.

INSULATION: Outside walls-1/2 in. insulating lath. Attic floor—4 in. of U. S. Gypsum Co. glass wool.
WINDOWS: Sash—cypress, double hung. Glass—double thick, quality A, Pittsburgh Plate Glass Co. Screens—copper and bronze mesh.

FLOORS: All rooms oak. Kitchen and bathrooms-lino-

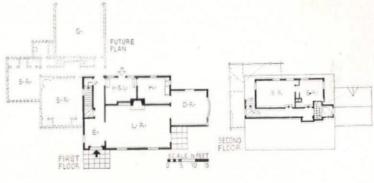
leum, Armstrong Cork Products Co. KITCHEN EQUIPMENT: Stove—gas. Refrigerator electric, General Electric Co.

PLUMBING: Fixtures by Standard San. Mfg. Co. HEATING: Hot water, concealed radiators.

## HOUSE FOR DR. HERBERT C. LYNCH, YAKIMA, WASH., FRANCIS H. FASSETT, ARCHITECT







LIVING ROOM

PROBLEM: To build about \$5,000 worth of house for a young couple with one child. House to be planned so that it can be increased.

The present house is compactly arranged to provide a required minimum of accommodation within the stated budget. A heater room is combined with the laundry, and is used for a service entrance as well. The placing of the dining room is an excellent solution for the small house: opening off the living room it increases the spaciousness of the interior, while the location of the door from the kitchen is completely concealed. The future extension has been planned so as to create a minimum of disturbance to the existing house. Cost: \$5,800.

## CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—frame construction, wood lath and plaster.

ROOF: Cedar shingles over shiplap-sheathed rafters. INSULATION: Roof—Quilt, 3-ply, Samuel Cabot, Inc. WINDOWS: Double hung on first floor, casement on second floor. Glass—single strength, No. 1 Pennvernon, Pittsburgh Plate Glass Co.

FLOORS: Living room, dining room and halls—white pine, pegged. Bedrooms—hemlock. Kitchen and bathrooms—linoleum.

rooms—linoleum.

ELECTRICAL INSTALLATION: Wiring system—knob
and tube. Switches—Hart & Hegeman.

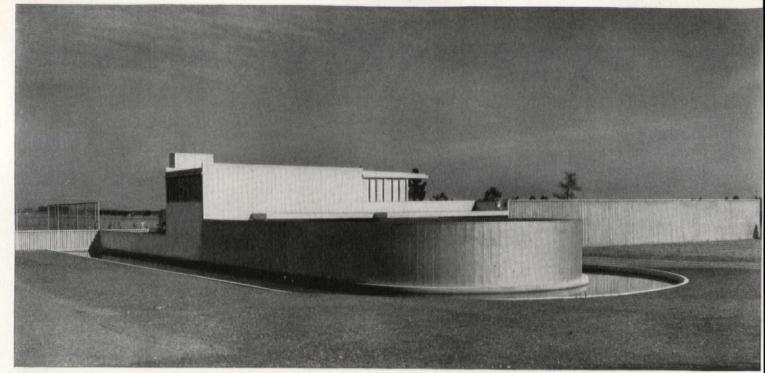
KITCHEN EQUIPMENT: Stove—electric Monarch,

KITCHEN EQUIPMENT: Stove—electric Monarch, Malleable Iron Range Co. Refrigerator—electric, Fairbanks-Morse.

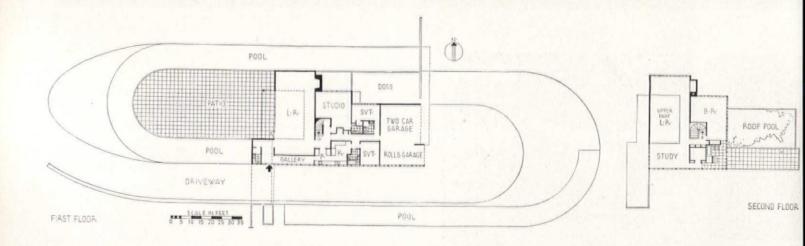
PLUMBING: All plumbing fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes—cast iron. Water supply pipes—galvanized iron.

HEATING AND AIR CONDITIONING: Hot air, oil fired, thermostat controlled, filters, tank humidifier.

# HOUSE FOR JOSEF VON STERNBERG, CHATTSWORTH, CALIFORNIA

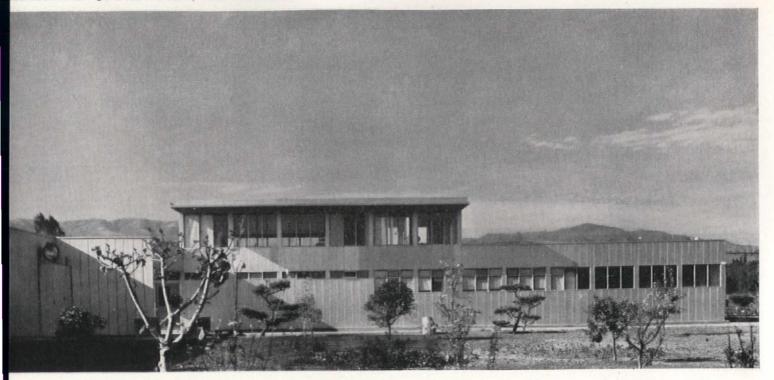


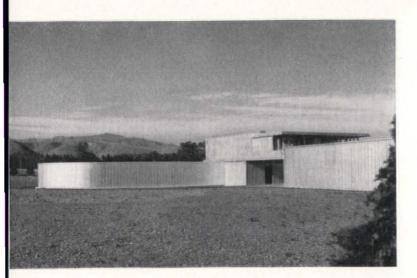
Luckhaus Photos

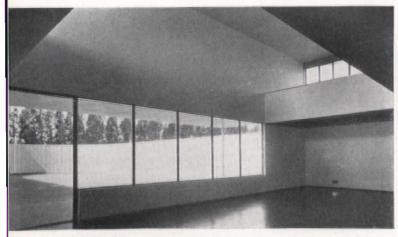


This remarkable house, built for the well-known moving picture director, is the latest development in the use of the steel wall panel system with which Architect Neutra has latterly been experimenting. Situated in the flat San Fernando Valley, surrounded by arid mountains on all sides, the house has a certain hard, precise quality which fits the environment. While its sleeping accommodations consist of only one master's bedroom and two servants' rooms, the house has been planned in a lavish manner, centering around a two-story living room almost 70 ft. in length. The patio, surrounded by steel walls, is paved with polished black terrazzo and is provided with an artificial rain system to cool the courtyard surface. Outside is a moat which extends back to the end of the building. Related to the house are tennis courts, a grove of eucalyptus trees, gardens, and orchards.

## RICHARD J. NEUTRA, ARCHITECT







LIVING ROOM

#### CONSTRUCTION OUTLINE

FOUNDATION: Walls-continuous slabs of waterproofed concrete, Medusa Portland Cement Co.

STRUCTURE: Exterior walls—copper bearing steel, H. H. Robertson Co., fabrication—Palmer steel construction; Celotex lath, sheet steel copings, trim and window stools. Interior partitions—double shell metal lath and plaster partition. Ground floor constructionconcrete. Second floor-steel, truss Joists. Decks and roof-H. H. Robertson Co. sections.

ROOF: Fire-retarding gravel roof covered with Pabco, Paraffin Companies, Inc. Deck covered with Terrazzo divided by aluminum strips. CHIMNEY: Steel, terra cotta lining. Fireplace-metal,

circulating air with intake and outlets upstairs and

SHEET METAL WORK-24 gauge galvanized steel flashings, eave fascias. H. H. Robertson columns; pool

INSULATION: Exterior walls—Celotex, heat mirror of aluminum coating on exterior walls.

WINDOWS: Sash-Druwhit steel, plateglass. Screenscopper roller, descending from concealed pockets.

FLOORS: Ground floor including outdoor living quarters and outdoor studio—black Terrazzo (Belgian marble) aluminum division strips. Upstairs—battleship linoleum, Armstrong Cork Products Co.
WOODWORK: Shelving—walnut. Cabinets—built-in.

Douglas fir in minor rooms. Doors-hardwood slab and Prestwood flush veneer with hardwood edge binding. HARDWARE: Schlage locks, chromium plated.

PAINTING: Interior: walls and ceilings-eggshell enamel. Albron aluminum painting on all exposed metal and steel.

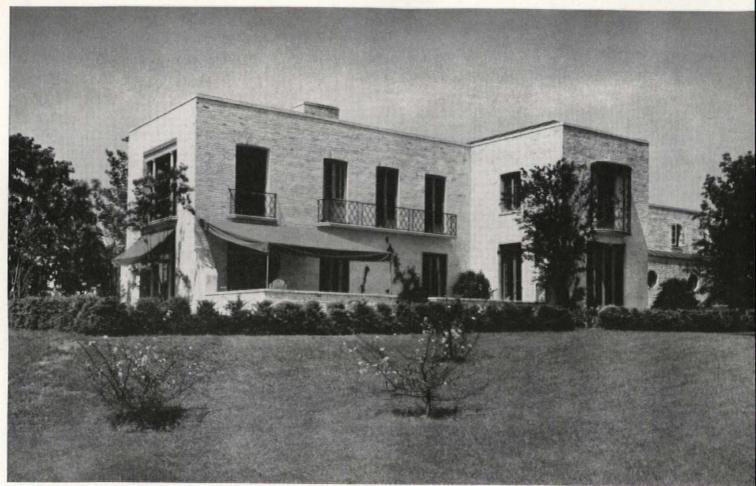
ELECTRICAL INSTALLATION: Appliances and wiring—General Electric Co. Fixtures—recessed lights in ceilings and walls, soffit lights at roof overhangs. Underwater lights for roof pool. KITCHEN EQUIPMENT: Stove and refrigerator—

General Electric Co. PLUMBING—all fixtures by Crane Co. Pipes—U. S.

AIR CONDITIONING-electric fan heaters and circulating air fireplace. Silentaire filtered air supply, electrically operated. Cooling by air convection in hollow steel wall.

SPECIAL EQUIPMENT-artificial rain produced by waterspray from all wall copings surrounding outdoor patio.

## HOUSE FOR EUGENE I. COWELL, SOUTH NORWALK, CONN.



Robert M. Glasgow Photo

This Connecticut house is an interesting development of the Regency house, and shows the close similarity in appearance that exists between the architecture of early Nineteenth Century England and that of contemporary America. The roof is sloped, but is so low that from most angles it seems to be flat. The balconies off the main second-floor rooms are attractive features whose treatment is also in the Regency manner. While of more-than-average size, the house has a very simple plan, with its various portions clearly articulated. A most interesting arrangement in the service quarters is a dining alcove. So placed that it contains a portion of the space needed for circulation from the garage, it also affords a view that shows more consideration for servants than is generally given. Living room, dining room, and porch open on a terrace which is the real living portion of the house in good weather. A canopy shades one end of the terrace, and a low wall gives the form definition.



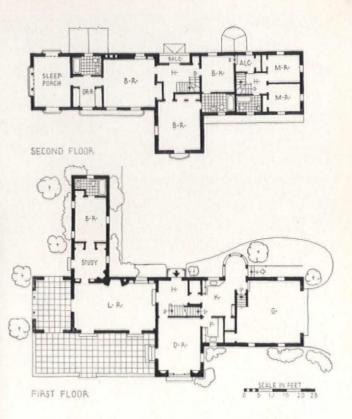
TERRACE



STUDY



SERVANTS' DINING ALCOVE



#### CONSTRUCTION OUTLINE

#### FOUNDATION

Walls-12 in. concrete, continuous. Cellar floor-4 in. cinder fill and 3 in. concrete floor. Integral waterproofing, Toch Brothers.

STRUCTURE

Exterior walls-4 in. brick veneer on frame construction, metal lath and plaster. ROOF

Construction-wood rafters, N. C. pine sheathing, covered with 16 oz. standing seam copper. Deck-covered with cotton duck deck fabric.

CHIMNEY

Oil burner flue insulated with 1 in, rock wool.

SHEET METAL WORK

Flashing and gutters-copper. Leaders-inside, wrought

INSULATION

Four inch rock wool over boiler room, same for attic floor. Weatherstripping—spring bronze.

Sash-wood casements. Glass-double thick sheet glass. Screens-Watson side-hung tubular steel.

FLOORS

Living room, bedrooms and halls-7/8 x 21/4 in. clear white oak. Kitchen and bathrooms-5/8 x 21/4 flat grain Georgia pine and rubber tile. WALL COVERINGS

Living room, bedrooms and halls-wallpaper.

WOODWORK

Trim: Study-knotty pine; remainder whitewood. Interior doors—birch veneered. Exterior doors—clear white pine. Garage doors—Overhead Door Co. PAINTING

Interior: Walls-3 coats flat lead and oil. Floors-wal-

nut stain, Pratt & Lambert. Sash-3 coats lead and oil. Exterior walls-Government formula whitewash.

ELECTRICAL INSTALLATION Wiring system—BX cable. Switches—toggle. Fixtures— Chase Brass & Copper Co., some special by Charles

Arcularius. PLUMBING

All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes-cast and wrought iron. Water supply pipes-brass.

HEATING AND AIR CONDITIONING

Boiler-oil fired. Humidifier-Connolly & Steam. Schmidt. Radiators—National Radiator Co. Valves— Jenkins. Thermostat-Statimatic temperature control. Hot water heater-Taco water heater with aquastat.

# OUSE FOR PHILIP S. HARPER, CHICAGO, ILLINOIS

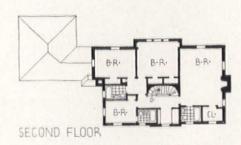


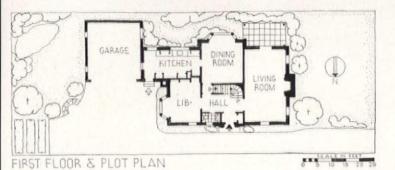
Hedrich-Blessing Photos

PROBLEM: To build a house of moderate size on a very restricted lot. Style and materials dictated by the owner.

The lot, which is only 50 ft. in width, made it necessary to develop a plan following the long dimension of the plot. A conventional plan turned sideways furnished a workable solution, with good orientation for all rooms. Circulation on the ground floor centers in the hall, with no other means of communication between rooms, an arrangement which, in a small house, involves no inconvenience and saves wall space. It was the owner's desire that the house be of brick painted white and that a severe exterior treatment be adopted. The only ornamentation occurs around the main entrance, a decorative scheme which is common in brick houses of the Georgian period. The garage has been placed to the rear of the property, and the drive also serves as a walk to the front door. Provision has been made for future rooms over the garage. Both in decoration and furnishings the interiors are in period.

## RALPH STOETZEL, ARCHITECT







STUDY



STAIRWAY

## CONSTRUCTION OUTLINE

#### FOUNDATION

Walls—continuous concrete. Cellar floor—concrete on cinder fill. Waterproofing—R. I. W., Toch Brothers, Inc. STRUCTURE

Exterior walls—13 in. common brick,  $1 \times 2$  in. furring strips, rocklath and 1 in. Red Top plaster, U. S. Gypsum Co. Floor construction-steel joists, concrete slab, wood laid in mastic.

#### ROOF

Construction—wood Joists covered with black slate. SHEET METAL WORK

Flashing, gutters and leaders—copper.
INSULATION

Outside walls and ground floor—Spray-o-flake. Attic floor—4 in. rockwool. Roof—Quilt, Samuel Cabot,

Inc. Weatherstripping-metal.

#### WINDOWS

Sash-double hung. Glass-1/8 in. plate. Screenscopper mesh, wood frame. FLOORS

Living room, bedrooms and halls-wood laid in mastic. Kitchen and bathrooms-linoleum. WOODWORK

## Trim, shelving, cabinets and interior doors—birch. Exterior doors—white pine.

HARDWARE

#### Interior-black iron. Exterior-old brass. PAINTING

Interior: All walls-canvas, paint, starch or wallpaper. Ceilings—paint or calcimine. Floors—stain. Trim and sash—paint. Exterior: Walls—white cement paint, Pratt & Lambert, Inc. Sash—white lead and oil. ELECTRICAL INSTALLATION
Wiring system—black enamel conduit. Switches—Pass

& Seymour, Inc. Fixtures-direct, Chase Brass & Copper Co.

#### PLUMBING

All fixtures by J. B. Clow & Sons. Soil and vent pipesiron. Water supply pipe-copper, Mueller Co. stream

#### HEATING

Hot water, oil fired. Boiler-Kewanee Boiler Corp. Radiators and valves-American Radiator Co. Thermostat-Minneapolis-Honeywell Regulator Co.

## OUSE FOR WILLIAM J. NAVIN, PORT WASHINGTON, NEW YORK



Gottscho Photos

PROBLEM: Chiefly one of placing a conventional house on a plot of moderate size (90  $\times$  145 ft.), with provisions for future expansion.

A house of Georgian type was designed to meet the requirements of the owner, who wanted a house that was formal in character. Complete symmetry was maintained on the front elevation, with a porch to balance the one-car garage, and a false chimney containing a bedroom closet to match the real one. It is planned to use the present attic space for additional rooms, and the necessary piping was installed when the house was built; also a row of windows was placed in the rear of the attic so that a minimum of structural changes would be required. The one-car garage is to be converted into an additional room, and a new two-car garage is planned for the rear of the plot. The garden has been placed in the front of the house, and its simplicity and formality are in character with the design of the house. Cost: \$10,500. Cubage: 30,500 at 34 cents.

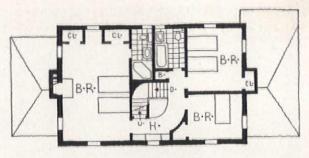
## THEODORE WHITEHEAD DAVIS, ARCHITECT



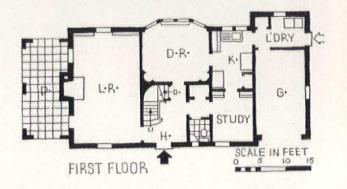
DINING ROOM



SECOND FLOOR-HALL



SECOND FLOOR



## CONSTRUCTION OUTLINE

FOUNDATION

Concrete blocks, 12 in. hollow.

STRUCTURE

-4 in. brick veneer, 1 in. air space, build-Exterior wallsing felt, 1 x 8 in. shiplap sheathing, 2 x 4 in. studs, lath and 3 coat plaster, hard wall finish.

ROOF

Construction—2 x 6 in. rafters, 16 in. o.c. Covered with 1 x 2 in. No. 1 spruce lath, 18 in. Perfection wood shingles spaced 5 in. to weather.

SHEET METAL WORK

Flashing, gutters, leaders—14 oz. copper. INSULATION

Roof-1/2 in. balsam wool.

WINDOWS

Double hung wood, Curtis stock. Storm sash on north and west. Glass-flat drawn single thickness. Screenscopper bronze, full length.

FLOORS

Living room, bedrooms and halls-red oak. Kitchen-pine with linoleum. Bathrooms-ceramic tile.

WALL COVERINGS

Living room, bedrooms and halls-wall paper. Bathrooms-tile.

WOODWORK

Trim-pine. Interior doors-6-panel 136 in. Colonial stock. Exterior doors-134 in. stock. Garage doors-roll

up overhead. HARDWARE

Polished brass, Schlage Lock Co.

PAINTING

Interior: Walls in kitchen and bath-enamel. Ceilingscalcimine except kitchen and baths which are enamel. Floors-Minwax. Exterior: Walls-permanent whitewash. Roof-creosote and linseed oil mixed with barn red. ELECTRICAL INSTALLATION

Wiring system-3 wire B.X. Switches-tumbler.

KITCHEN EQUIPMENT

Refrigerator-General Electric. Sink-Standard Sani-

tary Mfg. Co. BATHROOM EQUIPMENT

All fixtures by Standard Sanitary Mfg. Co. Cabinet-G. M. Ketcham Mfg. Co.

PLUMBING

Soil and vent pipes-extra heavy cast iron. Water supply pipes-brass with brass fittings.

HEATING

Steam with vacuum valves, using Quiet May unit.

# HOUSE FOR DR. G. F. WEINFELD, RAVINIA, ILLINOIS

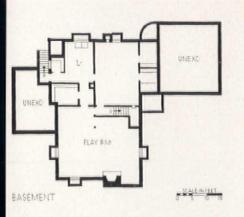


Hedrich-Blessing Photos



Sharply defined masses, windows in long rows, and roof decks designed for outdoor living have become characteristic external features of the modern house. While stucco, mainly for reasons of expense, has been the most commonly used surfacing material, brick, as used here, is eminently suitable, and provides more in the way of textural interest. The tall window of glass blocks which lights the stair hall runs the full height without interruption by landings, a most desirable arrangement both inside and out. The interiors are spacious, with relief given to some of the walls by the use of wood veneers. As is customary in this type of house, these walls are plain, with furniture, books, and curtains providing the decoration.

## JAMES F. EPPENSTEIN, ARCHITECT









LIVING ROOM



MASTER BEDROOM

## CONSTRUCTION OUTLINE

#### FOUNDATION

Walls—concrete, continuous. Cellar floor—concrete, cinder fill. Waterproofing—R.I.W., Toch Bros.

STRUCTURE

Common brick veneer on wood frame; interior 2 coats plaster on rock lath. First floor-reenforced concrete on Junior beams. Upper floors-wood joists, ceilingsplaster on metal lath. ROOF

Wood rafters, sheathed, covered with 3-ply built-up roofing.

SHEET METAL WORK

Flashing and gutters-Armco iron, American Rolling Mills Co.

INSULATION

Outside walls-balsam wool. Attic floor-rock wool. WINDOWS

Sash-steel casement, Hope's Windows, Inc., with interlocking weatherstripping. Glass-flat drawn, Libbey-Owens-Ford Glass Co.

FLOORS

All rooms-wood covered with linoleum. Bathroomstile.

WALL COVERINGS

Living room-flexwood; balance of rooms-painted. WOODWORK

Trim and doors—birch and walnut. Shelving and cabinets—birch.

HARDWARE

Interior-brass. Exterior-chromium plated. PAINTING

All interior paint by Pratt & Lambert. Exterior walls—brick paint. Samuel Cabot, Inc.
ELECTRICAL INSTALLATION
Wiring system—conduits, Sherorduct, National Elec-

wiring system—conducts, Salesonder, National Elec-tric Products Corp. Switches—Diamond H, The Hart Mfg. Co. Fixtures—Solar Lighting Co.

KITCHEN EQUIPMENT

Stove—gas, Geo. D. Roper Corp. Refrigerator—electric, General Electric Co. Sink—Crane Co. BATHROOM EQUIPMENT

All fixtures by Crane Co.

PLUMBING

Soil and vent pipes-cast iron. Water supply pipes: underground—lead; otherwise galvanized iron.
HEATING AND AIR CONDITIONING
Combination by Ilg Electric Ventilating Co. and L. J.

Mueller Furnace Co., filtering and humidifying. Oil fired boiler. Thermostat—Minneapolis-Honeywell Regulator Co. Hot water heater—No. 1 Bell, L. J. Mueller Furnace Co.

# HOUSE FOR KENNETH KRAFT, RAVINIA, ILLINOIS



Hedrick-Blessing Photos

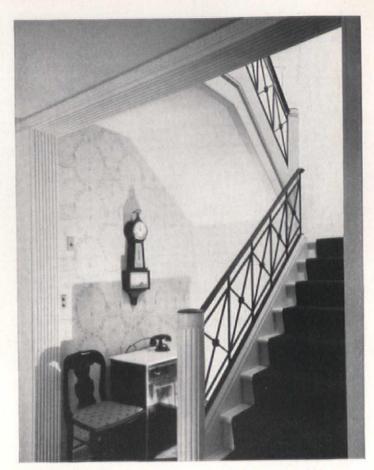
PROBLEM: To provide accommodations for a family of three, and for two servants.

The advantages of a carefully studied landscape plan are well demonstrated by this residence. The driveway runs into a walled court which is thickly planted with flowers. Outside of the court there are trees, shrubs, and lawn. This differentiation between flowers, trees, and lawn adds greatly to the attractiveness of the house, and the walled court produces an effect of size and dignity not often found in houses of this informal character. The orientation of the lot made it necessary to place the main rooms on the north, but where possible they open on the south as well. Circulation is ample and direct, and the disposition of the various elements has been well worked out. A private garden is located at the rear of the house, sheltered on one side by the house and on another by a projecting one-story wing which contains an open porch and a studio. The use of folding beds in the servants' bedroom is of interest; by moving the beds into their closet the bedroom is changed to a sitting room, adding considerably to the amenities with no increase in space. Cost: \$36,000. Cubage: 66,000 at 54 cents.

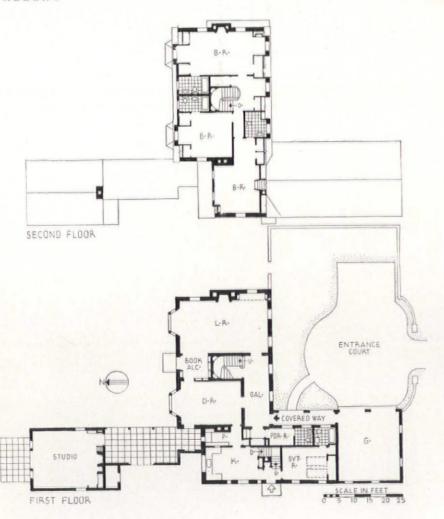
## WHITE AND WEBER, ARCHITECTS



GALLERY



STAIR HALL



## CONSTRUCTION OUTLINE

STRUCTURE

Exterior walls-common brick veneer and Haydite block backing.

ROOF

Black burned shingle tile, hand made.

CHIMNEY
Brick with terra cotta flue lining.
SHEET METAL WORK

Flashing, gutters and leaders—24 G. galvanized iron. INSULATION

Outside walls—1 in. Sprayo Flake, Sprayo Flake Co., Milwaukee, Wis. Second floor celling—4 in. rockwool.

Weatherstripping-zinc interlocking. FLOORS

Living room—unit oak block flooring. Entrance hall—black and white marble, diamond pattern. Kitchen—mastic tile, marbleized. Bathrooms—X-Ite wood fiber slabs, E. L. Bruce Co., and linoleum.
WALL COVERINGS

Living room-canvas painted. Bedrooms and halls-wall paper.

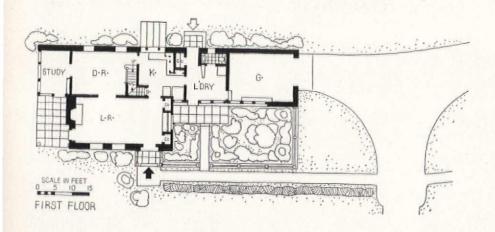
BATHROOM EQUIPMENT

# HOUSE FOR THE STAFF OF ELLIS COLLEGE, NEWTOWN SQUARE, PA.



W. POPE BARNEY, ARCHITECT

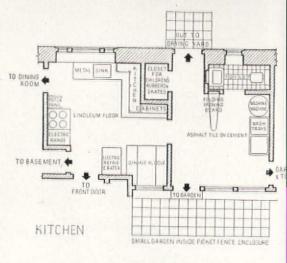
ROY W. BANWELL, ASSOCIATE



PROBLEM: To construct a dignified, inexpensive residence, sufficiently general in its accommodations to suit any faculty member to whom it might be assigned.

Local stone and wood are the traditional building materials in many parts of Pennsylvania. From the point of view of cost as well as utility they are eminently satisfactory, making possible the continuance of a building tradition that is as old as the State itself. The plan is simple and conveniently arranged, with the main rooms compactly grouped in a square, and the services contained in a one-story wing. Particular attention was paid to the layout of the kitchen and laundry, both of which combine a high degree of efficiency with small size. Bedrooms are small but adequate, and the storage space over the wing is well placed for easy access. Cost: \$13,000.







#### CONSTRUCTION OUTLINE

FOUNDATION: Walls-local stone, 18 in. thick. Cellar floors-4 in. concrete.

STRUCTURE: Local stone, 18 in. thick, on frame construction, furring and rock lath.

ROOF: Construction-wood rafters covered with shingles.

SHEET METAL WORK: Flashing-copper and lead.

Gutters and leaders—copper, INSULATION: Attic floor—4 in, rockwool. Weatherstripping: Windows—zinc interlocking; doors—copper. WINDOWS: Sash—white pine double hung. Glass double and single thickness, quality A. Screens-copper screen cloth.

FLOORS: Living room, bedrooms and halls-oak. Kitchen-linoleum. Bathrooms-tile.

WALL COVERINGS: Living room, bedrooms and halls -wallpaper.

WOODWORK: Trim, shelving and cabinets-poplar. Doors-white pine.

PAINTING: Interior: Walls and ceilings of bathrooms and kitchens-3 coats enamel.

ELECTRICAL INSTALLATION: Wiring system-3

KITCHEN EQUIPMENT: Stove and refrigeratorelectric. Sink-enameled iron.

PLUMBING: All fixtures, Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply pipes—copper. HEATING: Hot Water, oil fired boiler, thermostat controlled.

## HOUSE FOR PHILIP C. SMITH, CHATHAM, N. J., WILLIAM M. PAREIS, ARCHITECT





John Beinert Photos

Long experience has indicated that the square plan, with a living room balanced by dining room and kitchen and the hall in the center, is one of the most economical and satisfactory arrangements for the small house. Here a variation appears in the introduction of a unit between house and garage, a strip containing a laundry, service entry, and toilet. The exterior is in wood and painted brick, following in general the appearance of the Colonial work in this part of the country. Cost \$9,750.



#### CONSTRUCTION OUTLINE

STRUCTURE: Shingles on frame construction; inside

finish—lath and 3 coat plaster. ROOF: Covered with wood shingles.

SHEET METAL WORK: Flashing and leaders-copper. GUTTERS-Wood.

INSULATION: Outside walls, ground floor, attic floor and roof-4 in. rock wool. WINDOWS: Wood, Silentite, Curtis Companies, Inc.

Glass-Libbey-Owens-Ford Glass Co. FLOORS: Living room, bedrooms and halls-7% in. red

oak, Kitchen—linoleum, Bathrooms—tile, KITCHEN EQUIPMENT: Stove—gas, Refrigerator— General Electric.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes-cast iron. Water supply pipe-

brass, Chase Brass & Copper Co.

HEATING: Sunbeam furnace, Fox Furnace Co.

## HOUSE REMODELED FOR MRS. T. DURLAND VAN ORDEN, NEW YORK CITY



LIVING ROOM

Thurman Rotan Photo

PROBLEM: To convert a typical New York house, of narrow frontage and excessive depth, into a livable modern residence. Doctor's office also required.

The chief disadvantage of the small dwelling on Manhattan Island is its lack of sunlight and air, due to the vicious practice of subdividing blocks into plots approximately 20 x 100 ft. Here, in the original house, this disadvantage was increased by a projection in the rear. In remodeling, the excrescence was removed, baths were placed in the central portions of each floor, and the main rooms were shifted to the rear. The complete change in the character of the house is well illustrated by the above photograph, where windows extending from floor to ceiling let in a maximum of light, creating a simple, spacious interior. The doctor's office occupies the rear half of the ground floor, projecting enough to form a terrace off the living room. The interiors are modern throughout, restful in their decoration and furnishings.





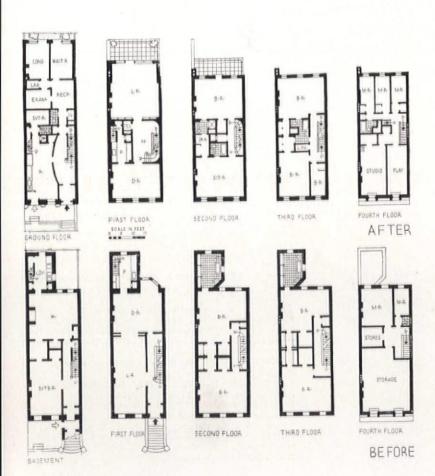
## JOHN C. B. MOORE, ARCHITECT



DINING ROOM



STAIR HALL



## CONSTRUCTION OUTLINE

STRUCTURE

Existing brownstone front facade patched where required with imitation brownstone. All new partitions wood studs with smooth white plaster. ROOF

5 ply tar and felt over existing structure. INSULATION Roof—rock wool blown between joists.

Sash—new casements, steel, in living room and ground floor rear, Crittall Mfg. Co., Inc. Glass—plate, Libbey-Owens-Ford Glass Co.

FLOORS

Living room and bedrooms-oak parquet. Halls-black and white linotile. Kitchen, studio and playroom— linoleum, Armstrong Cork Products Co. Bathrooms— tile, Mosaic Tile Co.

WOODWORK

Interior doors—flush doors in new portion. Entrance door—flush, veneered with V-Joints.

PAINTING

Walls and ceilings-flat paint throughout. Kitchen and baths-egg shell enamel. Floors-stained, shellacked

ELECTRICAL INSTALLATION
Wiring system—BX. Fixtures—built-in fixtures in upper hall, A. Ward Hendrickson.

KITCHEN EQUIPMENT

Stove—Smoothtop Vulcan, Standard Gas Equipment Corp. Refrigerator—General Electric Co.

PLUMBING

All fixtures by Crane Co. Soil and vent pipes-cast iron extra heavy, W. I. vents. Water supply pipes—brass. HEATING AND AIR CONDITIONING

Direct two-pipe steam ARCO convectors, separate air conditioning with Zephyr humidifier, ducts to all principal rooms. Oil-Petro oil burner. Thermostat—Minneapolis-Honeywell Regulator Co., Friez humidistat.

# HOUSE REMODELED FOR YANDELL BOATNER, SHREVEPORT, LA.

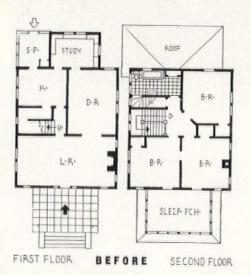


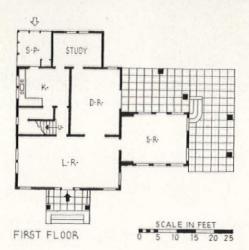
JONES, ROESSLE, OLSCHNER AND WIENER, ARCHITECTS

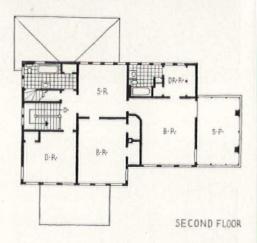
BEFORE



Marcus D. Weeks







PROBLEM: To remodel an old house in a manner consistent with the existing structure; to provide for future additions.

Too often the remodeling of an old house results in a complete elimination of characteristic features, with the altered building generally a safe Colonial. The Boatner residence is of unusual interest because the architects retained much that was good, such as the wide overhanging eaves, and were not afraid to base the remodeling on the original residence. Alterations were made with a minimum of structural change, most of the work being done on a new wing. The numerous windows shaded from direct sunlight provide excellent glareless light, and the sleeping porch, necessary in this climate, is designed as an integral part of the house. The owner made no stipulations in regard to style, enabling the architects to develop their highly imaginative and satisfactory solution.

#### CONSTRUCTION OUTLINE

STRUCTURE: Cement stucco on frame construction, shiplap sheathing, metal lath.

ROOF: Covered with asbestos shingles.

SHEET METAL WORK: Flashing, gutters, leaders and roof ventilator-24 gauge Armco, American Rolling Mill Co.

WINDOWS: Sash-wood, double hung. Glass-double strength, quality A, Libbey-Owens-Ford Glass Co. Screens-copper.

FLOORS: Living room, bedrooms and halls-oak. Kitchen—rubber tile. Bathrooms—ceramic tile. WALL COVERINGS: Living room, bedrooms and halls

-wallpaper. Kitchen-veneer board. Bathrooms-tile wainscot and plaster above.

PAINTING: Walls-semi-gloss enamel, Sherwin-Williams Co.

ELECTRICAL INSTALLATION: Wiring system-knob

and tube. Switches—Bryant toggle type.
KITCHEN EQUIPMENT: Stove—General Electric Co. Refrigerator-Kelvinator Sales Corp.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes-cast iron. Water supply pipessteel, Reading Iron Co.

HEATING: Unit gas heaters.

## HOUSE REMODELED IN GLEN RIDGE, N. J., MAXWELL KIMBALL, ARCHITECT



## BEFORE



William F. Cone

The large wood house of the late 1800's represents one of the more difficult problems in remodeling. Rooms are badly arranged, circulation is complicated, and shapes are invariably awkward. A solution here was found in the removal of the pompous tower and other complicated projections, and in a general squaring up of the entire house. For the original windows new small-paned sash was substituted. The onestory porch was eliminated and replaced by a high portico, and the remaining changes in roofing and surface treatment have left nothing that recalls the original residence. Impossible as they may seem at first glance, such old houses as this can often be made over into sound, well-equipped residences, at a saving which is frequently considerable.

## R. W. SEXTON, ARCHITECT



#### CONSTRUCTION OUTLINE

STRUCTURE: Retained.

ROOF: Slate on existing frame. Deck-canvas, Bayonne deck cloth, John Boyle & Co., Inc.

METAL WORK: Flashing and gutters-

STAIRS: Oak treads, birch handrail.

FLOORS: Living room, bedrooms and halls-oak. Kitchen-linoleum, Armstrong Cork Products Co. Bathrooms-tile.

WALL COVERINGS: Living room, bedrooms and halls -wallpaper. Kitchen and bathrooms-tile wainscot. HARDWARE: Interior-brass. Exterior-wrought iron.

Garage doors—Over-the-top, Frantz Mfg. Co.
KITCHEN EQUIPMENT: Stove—gas, The Estate
Stove Co. Refrigerator—electric, Westinghouse Electric & Mfg. Co.

PLUMBING: All fixtures, Standard Sanitary Mfg. Co. Soil and vent pipes-brass.

HEATING: Steam, Quiet May oil burner.



Hedrich-Blessing

PROBLEM: To remodel a "General Grant Gothic" barn into a New England Colonial house.

The original structure, according to the architect's description, "seemed impossible." Vertical siding, scrollwork on the eaves, tall, narrow windows were only a few of the items that required removal or drastic change. In the course of re-planning, the groom's entrance became the front door; the tack room, a reception hall; the oat storage bins and box stalls, a kitchen and dining room. The structure of the barn was sound, and was re-used. In removing the old siding it was found that oats had been used in the walls for insulation. A new basement was put under the house, and the barn was cut down somewhat to suggest the low lines of a New England farmhouse.

STABLE



## JEROME ROBERT CERNY, ARCHITECT



ENTRANCE DRIVE

Hedrich-Blessing Photos



LIVING ROOM



DINING ROOM







#### CONSTRUCTION OUTLINE

#### FOUNDATION

Walls and cellar floor-concrete. Waterproofing-tar. STRUCTURE

Frame construction. Interior partitions—plaster on rock lath. Floor construction—wood.

#### ROOF

Hand split shakes on wood construction. SHEET METAL WORK

Flashing—copper.
INSULATION

Rock wool, bronze weatherstripping.

WINDOWS

Sash—double hung. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co. Screens—bronze. FLOORS

Living room, bedrooms and halls-cak. Kitchen and

bathrooms—tile.
WALL COVERINGS
Bedrooms, halls and bathrooms—wallpaper. Other rooms—paint.

PAINTING

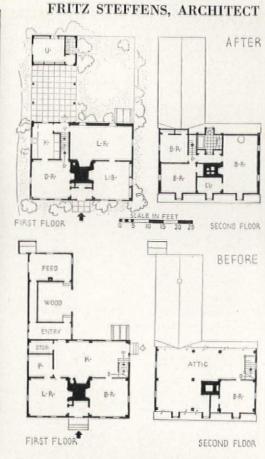
Interior—eggshell enamel, Exterior—flat white. KITCHEN EQUIPMENT All equipment by General Electric Co.

PLUMBING

All fixtures by Crane Co.
HEATING AND AIR CONDITIONING
Split system air conditioning.

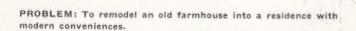
# HOUSE REMODELED FOR CHARLES BRADFORD PALMER, OLD LYME, CONN.







BEFORE



The original house was built in 1805, and its continued occupancy since that time accounts for its excellent condition prior to remodeling. It was considered desirable to disturb the house as little as possible, maintaining its old character; the original sashes, doors, hardware, etc., were copied where replacements were needed. In plan, the room locations were reversed, the kitchen becoming the living room, and vice versa. As the second floor had been used as an attic it was only necessary to build new partitions to provide the additional living space needed. Cost of remodeling: \$4,000.



AFTER

## CONSTRUCTION OUTLINE

STRUCTURE: Old framework maintained. Sills and floor beams under old kitchen replaced. Cellar waterproofed, new concrete floor laid.

WINDOWS: New windows installed throughout. STAIR: Existing stair removed and new one built at

north end of living room.

FLOOR: Old floor boards removed, shiplapped by hand and relaid over new sub-floors.
WALLS: Replastered and wallpapered.

### HOUSE FOR T. A. PATTERSON, NIAGARA FALLS, N. Y., SEWALL SMITH, ARCHITECT







PROBLEM: To transform a small summer cottage into a larger year-round residence.

Great ingenuity was displayed in this remodeling job. It involved the addition of a second floor, a basement, and a complete change of the exterior. Levels are staggered to cut down stair climbing and to gain usable space. Cost: \$7,647. Cubage: 34,180 at about 22 cents (not including price of original house).







#### CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls-solid 12 in. brick and

ROOF: Covered with Weatherbest shingle on frame. INSULATION: Outside walls, attic and roof—4 in. rockwool. Ground floor—1/2 in. Celotex.
WINDOWS: Sash—double hung, Curtis Silentite. Glass

-1/8 in. single strength, quality B, Lustraglass, Ameri-

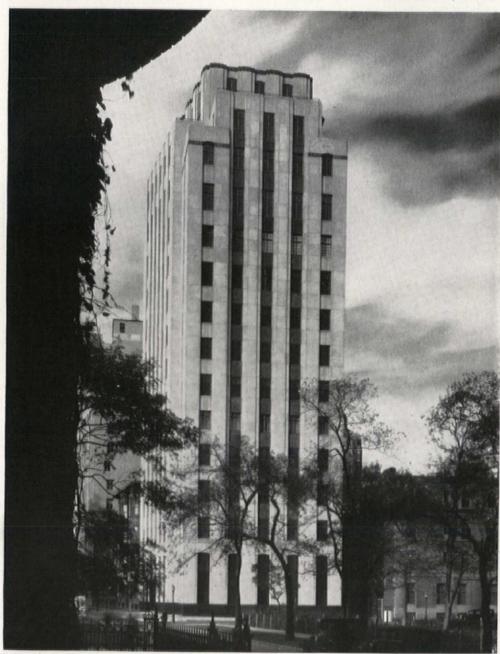
can Window Glass Co. Screens—copper. WOODWORK: Oak floors; trim, shelving and exterior doors—white pine. Interior doors—birch.

ELECTRICAL INSTALLATION: Radial wiring system, General Electric Co.

KITCHEN EQUIPMENT: Stove and dishwasher-Gen-

eral Electric. Refrigerator—Frigidaire.
PLUMBING: All fixtures by W. A. Case & Son Mfg. Co.
Soil pipes—cast iron. Water supply—copper.
HEATING: Thermostat controlled oil burner with
filtering and humidifying, General Electric Co.

# APARTMENT AT 1301 ASTOR ST., CHICAGO, ILLINOIS





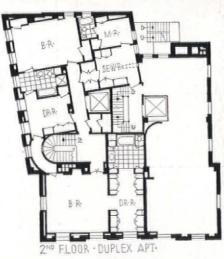
Hedrich-Blessing Photos

A cooperative, this building was financed by a number of wealthy Chicago families who wanted all of the convenience and space of town houses without the attendant expense. The corner site faces a small park on the south, and for protection the owners bought the adjoining property. The building was designed to accommodate a maximum number of possible interior layouts. The financial set-up provided that the owners shared the cost of the shell and the common services, which were figured as a single contract. All finishes were left to the tenants, who were at liberty to spend as much as they wished on the decoration of their apartments.

#### PHILIP B. MAHER, ARCHITECT



LIVING ROOM







#### CONSTRUCTION OUTLINE

FOUNDATIONS

Footings and foundation walls-concrete. Waterproofing -asphalt and integral waterproofing.

STRUCTURE

Exterior walls-select buff Indiana limestone veneer, common brick backing on structural steel frame. Hol-low tile interior wall enclosing columns and pipes. Interior partitions-hollow tile, plastered. Floor construction-concrete. Hung plaster ceilings, furring strips laid on sound deadening steel springs. ROOF

Concrete, insulation, composition covering.

SHEET METAL WORK

Flashing-copper.

WINDOWS

Sash-wooden casements, weatherstripped. Glassdouble strength. Screens-wood frame, full opening on exterior.

STAIRS AND ELEVATORS

Passenger and service elevators-Otis Elevator Co. FLOORS

Public lobby-Terrazzo with Monel Metal inlay. Finished floors in apartments-marble, walnut, oak, tile and Old French parquet.

FLOOR COVERINGS

Kitchens and servants' pantries-rubber tile through-

WALL COVERINGS

Canvas and paint, Flexwood, wallpaper.
WOODWORK AND SPECIAL TRIM
Trim—enameled birch. Interior doors—birch, walnut

and oak. Exterior doors-metal. ELECTRICAL INSTALLATION

Wiring system-conduit to each apartment.

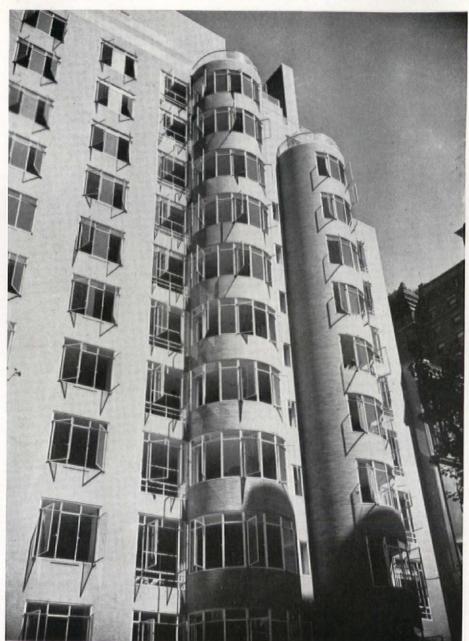
PLUMBING

All fixtures by Crane Co.

HEATING AND AIR CONDITIONING

Heating-two pipe steam, oil fired. Individual humidiflers in each apartment. Radiators-concealed cast iron.

# APARTMENT THE ROCKEFELLER APARTMENTS, NEW YORK

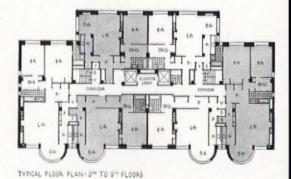


John Beinert

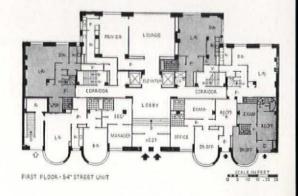
J. ANDRÉ FOUILHOUX WALLACE K. HARRISON

ARCHITECTS



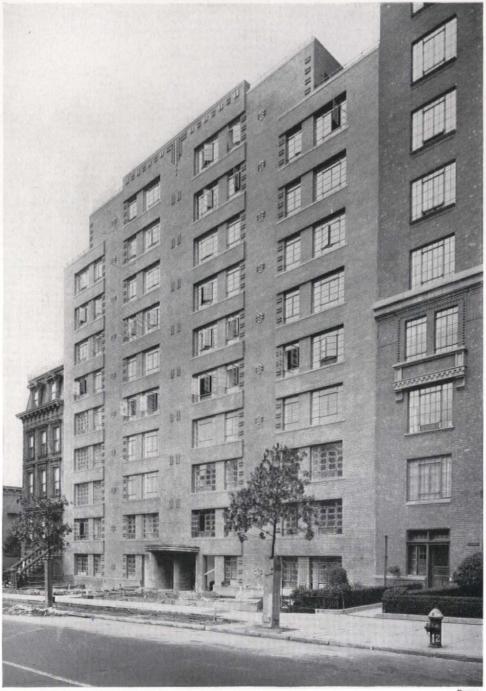


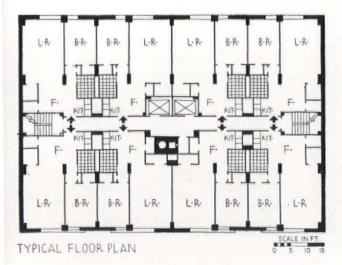
This recently completed building, designed for the amenities of modern apartment living, offers the most sophisticated quarters in Manhattan. It is the first mid-town construction enterprise of the Rockefeller interests to expand beyond Rockefeller Center. The exterior gains interest through fenestration, mass and four cylindrical vertical bays which provide space for dining alcoves in each of the front apartments. The windows of these bays face out so that complete privacy is attained. Portions of the ground floor are utilized for stores and doctors' offices and maids' rooms occupy the rear of alternate floors. A garden divides the two building units.



# APARTMENT 99 LAFAYETTE AVENUE, BROOKLYN, N. Y.

JACOB MARK, ENGINEER A. MARKEWICH, DESIGNER JAMES W. NELSON, BUILDER





The location of this apartment house in a neighborhood largely occupied by decrepit "brownstones" was the result of a realty survey which showed the district still sound, a shortage of attractive living quarters, good transportation facilities and shopping centers. Minimum family apartments, contained in a building ten stories high, allowed the proper ratio between cost and comfort. A free flow of space between the living room and foyer (large enough for dining) gives the plan an open character. Windows located adjacent to a side wall allow maximum opportunity for furniture arrangement.

# APARTMENT BRIGHTON BEACH GARDENS, BROOKLYN, N. Y.



JOSEPH P. DAY, INC., BUILDER KAVY & KAVOVITT, ARCHITECTS

The Brighton Beach Apartments occupy a section which was formerly distinguished chiefly for music halls, a midway, and long rows of bungalows.

Largely rehabilitated, the neighborhood takes full advantage of the oceanfront; commuters to Greater New York enjoy economical subway transportation. This unit, typical of the garden plan used, contains two six story apartments; the total cost of which amounted to approximately \$1,650,000.



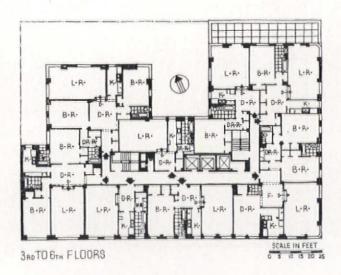
GARDEN COURT

#### APARTMENT 19 EAST 88TH STREET, NEW YORK WALLENSTEIN REALTY CORP.

WILLIAM M. DOWLING ARCHITECT



New York Times Studie

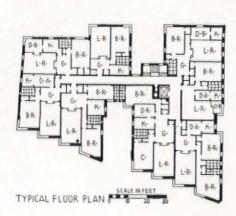


This building is a commendable solution of the corner lot designed to obtain desirable orientation of the apartment units. The compact and efficiently located service quarters allow well-proportioned and relatively large living rooms dropped in level to insure further importance. Halls have been cut down to a minimum. The pattern of the elevation has been achieved economically through the simple and effective use of varicolored face brick; while steel casement and corner windows answer the contemporary demand for ample light and air.

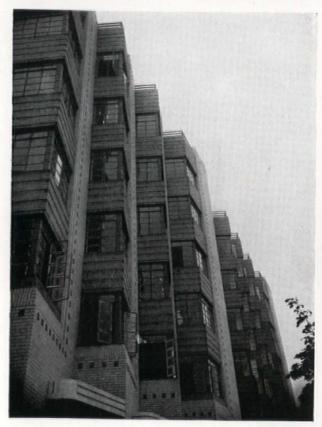
# APARTMENT GRAND CONCOURSE, BRONX, N. Y., H. GINSBERN, ARCHITECT



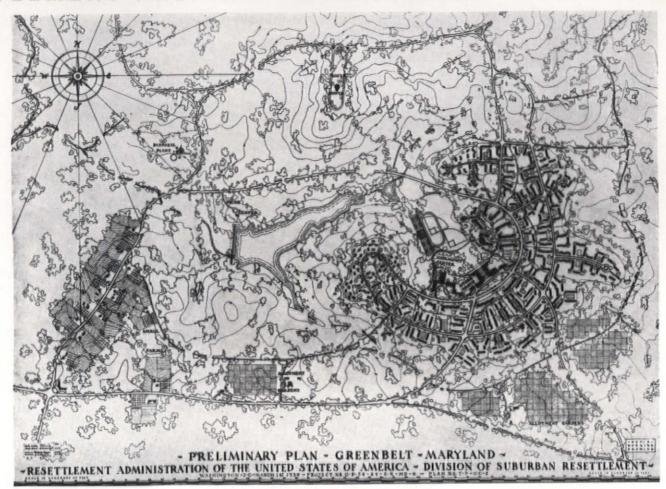
John Beinert Photos



The corner window has completely captured the apartment house field, so much so that the normal number of corners no longer suffice. In this ingenious example even rooms which formerly had but one exposure now gain a second while privacy is completely maintained. Because of its location in a populous section of New York, this apartment house provides ground floor shops.



### RESETTLEMENT PROJECT GREENBELT, MARYLAND





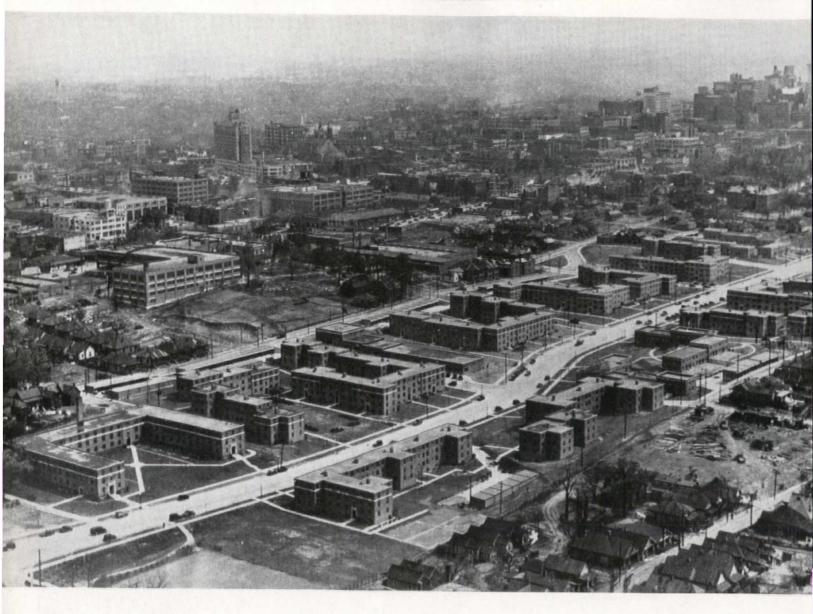




Resettlement Administration, Dreier

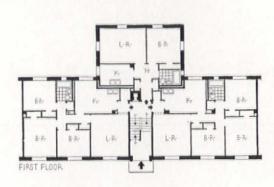
Greenbelt is one of three low-rent suburban projects under the Resettlement Administration. Unlike Hightstown, these projects are communities of which the inhabitants commute to work in neighboring cities. Planned as a complete town, including houses, commercial and community buildings, roads, utilities, and recreational facilities, Greenbelt is of outstanding importance as a "yardstick" for community planning. The total number of residential units will be 1,000. The town contains 2,100 acres, largely devoted to a permanent encircling "greenbelt" of farms and woodland.

# HOUSING FEDERAL EMERGENCY ADMINISTRATION

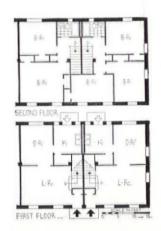


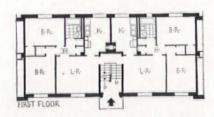
Techwood is the first project on the slum clearance program of the PWA to be completed. Its 603 dwelling units replace about thirteen blocks of slum houses, and its rentals run from \$16.40 for a three-room apartment to \$27.85 for a six-room row house. Applicants in the \$1,000 to \$1,500-per-year income class are being given preference. Between the buildings are small parks and play areas for children. Coverage is about 25 per cent. The project was constructed under a PWA allotment of \$3,101,500.

#### TECHWOOD HOUSING PROJECT, ATLANTA, GA. BURGE AND STEVENS, ARCHITECTS











GARDEN VIEW



STREET VIEW



COMMUNITY LAUNDRY

# RESETTLEMENT PROJECT

HIGHTSTOWN, NEW JERSEY

U. S. RESETTLEMENT ADMINISTRATION





Resettlement Administration, Lange Photos

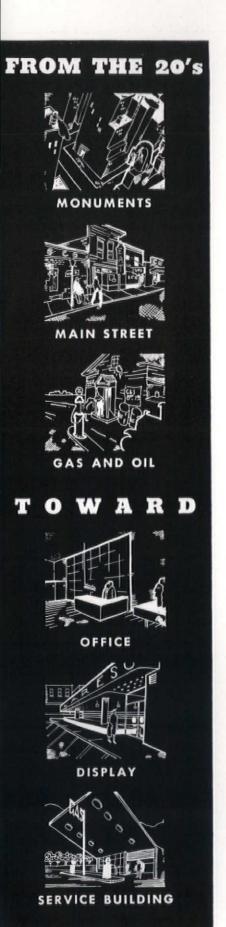
Hightstown is a small, entirely new community of garment workers with 200 houses now under construction, 200 more planned. It is one of the first Government-sponsored attempts to induce workers of a centralized industry to desert the congestion of a large city for more favorable living conditions. Hightstown is in no sense a suburb, for both factory and workers are located in the community. The group is set up as an agricultural-industrial cooperative to furnish employment, and as a consumer's cooperative to furnish services and goods. Manufactured goods are distributed through the usual trade channels. The houses are of cinder block, have flat roofs, cost an average of \$4,445.64 each, with an average cubage of about 17,000.





AREA OF PROJECT - 1200 ACRES

# commercial



"Chasms" and "Canyons" of the business metropolis are dramatized in the popular press, while the comfort and surroundings of the office worker are practically, if not completely, overlooked. Office equipment is a thing apart, designed and manufactured with little regard for its use and place in the architectural scheme.

Warehouse type of store which offers for sale its anonymous supply from walllike counters in careless displays. Main Street becomes the symbol for confused and violent contrast, due in part to the complete disassociation between the architecture and its purpose; an architecture which follows the order of precedent and tradition in the glorification of the wall surface per se while the problem of preserving and displaying the merchandise remains ignored and unsolved.

The shack reminiscent of pioneer travel and experimental transportation. Speed and acceleration are incompatible with an architecture designed to serve the horse and buggy, therefore neither a part of nor an embellishment of the increasingly efficient and far reaching network of motor highways. The motor witnesses rapid and often radical alterations. The architecture is still conceived in a spirit of finality and permanence, with the result that new and essential requirements are made worthless by their incorporation in obsolete shells.

Interior organization appears in the increasing frequency of remodeling jobs. The exterior architecture strives to be informal and inviting, rather than austere and ponderous. The effect of textures, colors, and lighting upon the efficiency and concentration of the senses has been given much serious study, results in an increasing use of such innovations as acoustical materials, air conditioning, shadowless lighting, and resilient floor surfaces. The Office Building is an island of efficiency surrounded by increasingly congested traffic.

Selling begins on the sidewalk. The facade is a transparent screen which must provide a personal cachet, act as a proscenium to the display of products and provide ample accessibility. Since the majority of stores occupy rented space, and since each has its own problems of circulation, service, and display, the trend is to adapt a partially enclosed space into elements of extreme elasticity while including in the general requirements the latest developments in mechanical equipment and lighting.

The salesroom, garage, and filling station incorporated into the Service Building. Each need has been defined and redefined by technician and manager. The contemporary scheme insists, not on the grandiose plan, but upon compactness, straight line correlation of various departments, efficiency of control, elasticity of plan to insure facility of expansion, relocation and accessibility.

#### **AIRPORTS**

The existing conditions of many landing fields were formerly so acutely experimental and dangerous that much has already been done in the lengthening, broadening, grading, lighting and draining of runways. Fireproofing is a mandatory requirement in all contemporary airport buildings and all recent structures connected with air transportation therefore have used reenforced concrete and steel construction. Due to the ever increasing size of commercial airplanes, shops and hangars have to be designed like bridges to comply with the new requirements for clearance and span. Since the aeronautical sciences are still in the process of development, in the planning of new airports special care must be exercised to provide extreme elasticity for future change.

#### BANKS

Bank building has been confined almost exclusively to the small town. The character of such buildings strives to be inviting rather than monumental. Due to the development of the built-in unit as an architectural by-product interior remodeling includes a complete redesigning of the fixtures. The opaque and heavily carved banking screen, the massive counters and overstuffed sofa have been replaced by low and open glass screens, comfortable desks and chairs of straightforward design.

#### BARS

A new conception of relaxation has superseded the stuffy and violent night club atmosphere. Both liquors and surroundings are seen as sources of physical enjoyment and the bar room must now be properly air conditioned. The general treatment must bring out the fact that originality does not necessarily mean a preponderance of color clashes, but rather an intelligent and imaginative use of materials, colors and forms.

#### BEAUTY PARLORS

The living room atmosphere of privacy is mandatory in this type of establishment. This is obtained by segregating the treatment rooms and booths from the reception space and by soundproofing. The design of massage, facial and hairdressing rooms is always dictated by their intricate uses.

#### RESTAURANTS

The salient requirements for financially profitable establishments indicate that restaurant designs are now dominated by their mechanical and functional perquisites. The increasing necessity for air conditioning, glareless lighting and sound absorption have led designers to unify these various technical solutions into a correlated architectural expression. Thus the ceilings are dropped since they are no longer needed to eliminate odors. Air ducts, stainless metal fixtures, acoustical materials, lighting are organized not only to provide comfortable and intimate dining but are unified to obtain a maximum use of space.

#### SERVICE STATIONS

This type of building must arrest the attention of the moving motorist. Therefore the successful solution must combine architectural advertising with the routine of automotive servicing. Color used with simple and effective forms in steel and glass gives results which are striking to the eye and eminently functional since they allow for ample visual control, ease of cleaning and prefabrication. Glass block, cantilevered canopies, special steel sections, and increased variety of artificial lighting offer countless possibilities to service station designers.

#### STORES

The primary function of commercial architecture is to frame and display the salable stock, and to procure the most comfortable surroundings available both for customers and employes.

The store front is a labeled show case, and new metal sections and new tile and glass products have enabled the designers to produce transparent facades of great solidity which are impervious to rain, cold and sun. Floor coverings have become an integral part of the design, their purpose both decorative and functional. They eliminate partitions by marking the divisions between various departments, they guide the customer traffic in the desired direction, they offer resilient, easily cleaned and noiseless surfaces. Illumination today must take into account both the intensity and the tonal quality of light needed. Articles which appear dull and lifeless under low light levels will gain desirable brilliance under higher light intensities, provided that the light source has been designed to eliminate glare. Too much diffusion will give counter or window displays undesirable flatness, while too little diffusion results in sharp reflections annoying to the eyes. The area of plate glass show window is determined by the scale of the featured merchandise. The show window is a theater both by day and by night. As in stage lighting, standard equipment offers an infinite variety of effects.

Air conditioning has been responsible for increased sales, since it aids materially the health and efficiency of the employes, reduces spoilage and adds much to the comfort of the customers.

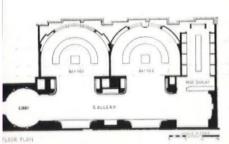
Commodity stores have found that the ideal fixture for increased display is the "island" type of counter. This enables customers to touch and see the articles, and at the same time offers unhampered circulation throughout the store. Extraneous woodwork has been completely eliminated. Colors are used sparingly in order not to conflict with the importance of the packaged product. Furthermore, refrigeration, ventilation and lighting have become functional requirements the appearance of which need not be disguised.

#### OFFICE BUILDINGS

Office buildings are moving toward an ultimate solution involving the complete control of air, light and sound. As air conditioning is improved, and its cost reduced, its use promises to increase greatly in this field; thus making the window less necessary for ventilating, while artificial illumination makes it less necessary for lighting. However there is little reason to assume that the window will be eliminated; tenants will not accept the role of shut-ins, condemned to closed cubicles, no matter how great the bodily comfort. "A room with a view" will still be demanded in offices as well as domestic quarters. The low salvage value and space eating quality of the former partition has given impetus to the installation, in recently completed office buildings, of the standardized and lightly constructed standard partition screen. The translucent glass wall has proved its value as a dividing unit which allows light penetration. Escalators are gaining use in the correlation of ground and mezzanine levels, since they have made it possible to transfer activities to an upper and less valuable level freeing the ground floor for higher income producing units such as stores.

## HOWROOM ALUMINUM COMPANY OF AMERICA, NEW YORK





F. S. Lincoln Photos

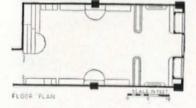
#### LURELLE GUILD, DESIGNER

A very well designed display of aluminum products. The problem presented by the multiplicity of objects to be shown has been solved by breaking up the area into a number of alcoves, and by further dividing these smaller spaces by means of recessed shelves. The advertising is not confined to the products themselves: aluminum has been used in the lighting fixtures, furniture, and the display stands. This is an excellent illustration of the strides made in display technique during the past few years.



Hedrich-Blessing Phot

WARNER W. HOOPLE, DESIGNER



PROBLEM: To display great numbers of small objects in the least confusing manner possible.

Display shelves are broken up into units, each unit being devoted to a particular line of goods. The color scheme is blue and buff, with the merchandise itself providing the decorative accents. A portion of the showroom is devoted to gift wares and accessories, and is treated in a somewhat more intimate manner. Lighting is indirect, and fixtures are of aluminum.



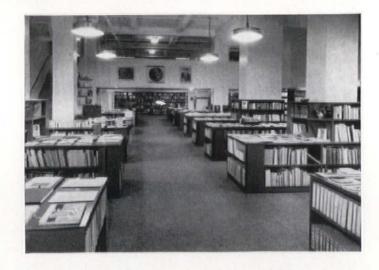
# STORE B. WESTERMANN CO., NEW YORK KENNETH H. RIPNEN CO., DESIGNERS



Robert E. Coates



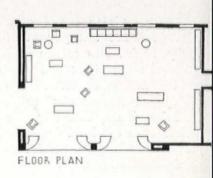
Westermann's is a large book store dealing in books on science and art, a large part of its stock consisting of foreign books. Its owners suggested that the design be entirely based on the requirements of display and selling, and that modern character be given the solution. A high ceiling gives a pleasant atmosphere to the interior, and the height is emphasized by the concentration of bookshelves from eye level down to the floor. The lighting, provided by large direct-type fixtures, is excellent. Approximate cost: \$10,000.



Gray taupe carpet over entire floor. Walls painted French gray. All trim, such as tables, shelving, counters are metal, painted bright blue, flat finish. Natural limestone front, aluminum letters.

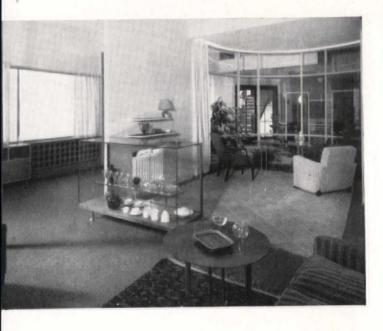


In the design of department store layouts there is a definite trend toward the abandonment of large, uninteresting spaces, subdivided only by counters. The new store favors the creation of a series of internal shops, each arranged according to the exigencies of merchandising, and each decorated in an appropriate manner. Two such internal shops are shown here in the Vendôme, a store selling furniture and women's dresses. The dress unit has a look of tailored smartness which is due chiefly to the restraint used in the display of clothing, and the unobtrusiveness of the merchandise cases. The furniture display casually suggests a living room opening on a large terrace. In both shops the display of too much merchandise has been pleasantly avoided.

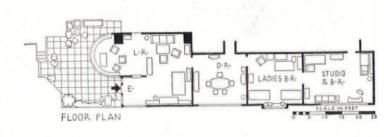


#### SZLO GABOR, DESIGNER

FURNITURE DISPLAY







VENDÔME SHOP





# DEPARTMENT STORE J. BLACH & SONS, BIRMINGHAM, ALABAMA



WARREN, KNIGHT & DAVIS
ARCHITECTS



C Fell.





Southern News Service Photos

This remodeling job converted a local eyesore into a modern retail center. The original building, 50 years old, was used mainly as a cheap hotel; remodeling changed it into an air conditioned, scientifically lighted store. The windows were left unchanged since artificial lighting was considered more satisfactory. New fixtures were installed throughout, and show windows were designed for individual rather than mass displays. The lighting is of unusually high intensity both in the show windows and in the various retail departments, and has proved a major factor in successful merchandising.

#### CONSTRUCTION OUTLINE

STRUCTURE: Steel girders erected as supports for floor Joists. Facing of first floor—limestone, upper stories stucco over existing brick walls.

ENTRANCE AND SHOW WINDOWS: Trim—stainless steel.

steel. LIGHTING: Cove lighting system in ceilings, Erikson Electric Co., Boston, Mass.

STORE FIXTURES: Outside—Oriental walnut, inside white maple. Second floor—finished in mahogany, Hugh

Lyons, Lansing, Mich. RUGS: Mohawk Carpet Mills, Inc.

AIR CONDITIONING: Complete building air conditioned with evaporative condensers, high velocity outlets placed in side walls near ceiling, Carrier Engineering Corp.

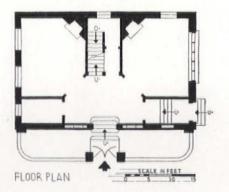
# **STORE** ZENITH RADIO, CHICAGO, ILLINOIS, PHILIP B. MAHER, ARCHITECT











Remodeling here consisted of building a display window space in front of the old building and of covering the rest of the building with stucco over metal lath. The semicircular projection serves not only as a sign motive but as a light well for the old windows which open into toilet rooms. The building is air conditioned.

## STORE WEBER AND HEILBRONER, NEW YORK CITY



Peyser & Patzig Photos



Weber and Heilbroner, through a chain of stores, sell clothing and accessories in the moderate price range. Business is done on a large scale, with a quick turnover, and the problem, therefore, was more complicated than that of a small, high-priced shop which can keep most of its merchandise out of sight. A successful solution was found in subordinating the cases, concentrating attention on the orderly rows of suits, shirts, etc. The furniture depends entirely upon the texture of the wood for its effect, and the lighting is unobtrusively placed where it will do the most good.

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#### ARCHITECTURAL

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MAIL THIS CARD TODAY - IT NEEDS NO STAM

Postage Will be Paid by TIME Inc.

No
Postage Stamp
Necessary
If Mailed in the
United States

# BUSINESS REPLY CARD

# THE ARCHITECTURAL FORUM

CACHITECTOROL FOR

350 EAST 22nd STREET

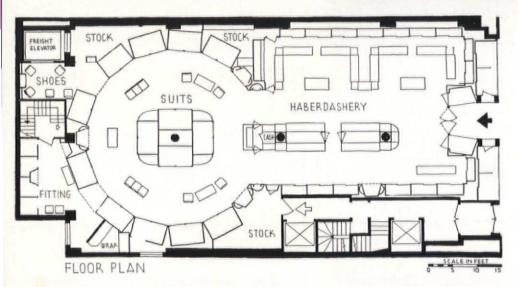
TIME Inc.

CHICAGO, ILL



#### GRAND RAPIDS STORE EQUIPMENT CO., DESIGNERS







SHOES

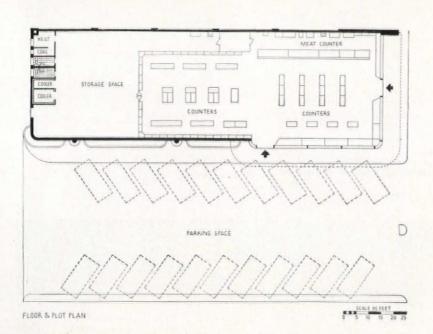


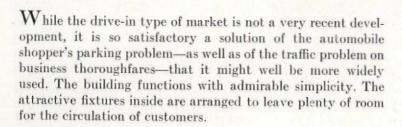
HABERDASHERY

# MARKET INDIANAPOLIS C. WILBUR FOSTER ENGINEERING CO.



W. F. Jones Photos









#### CONSTRUCTION OUTLINE

STRUCTURE: Steel frame, buff Indiana limestone facing, balance Stark Brictile.

ROOF: Wood, 4 ply built-up asphalt roof.

WINDOWS: Store front settings, Kawneer Co. Sash—134 in. heavy Fenestra Detention windows in rear, Detroit Steel Products Corp. Glass—½ in. Factrolite in steel sash; ¼ in. polished plate in show windows. FLOORS: Terrazzo throughout.

PLUMBING: All fixtures by Crane Co. Soil and waste pipes—cast iron. Vents—wrought iron.

HEATING: Steam unit heaters, Young Radiator Co.

## SERVICE STATIONS



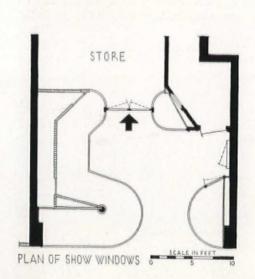
DESIGNED BY: THE STANDARD OIL CO. PREFABRICATED BY: THE AUSTIN CO., CLEVELAND

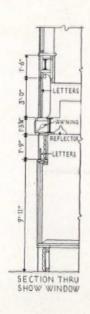
> It is a far cry from such buildings as these to the miniature chateaux which were formerly considered suitable for housing gas pumps. The Standard Oil Company station, shown above, is entirely prefabricated. The building is metal and glass, with porcelain enamel as the finish where color is required. The concrete lubricating building below is one unit of a large service station, which, when completed will cover 40,000 sq. ft., and will contain seven separate buildings. It is located in Hollywood, California.

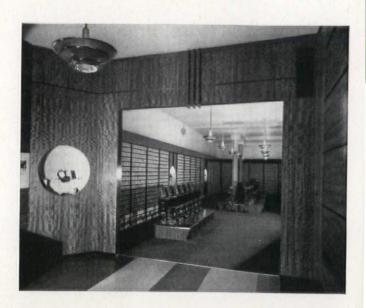


ARCHITECTS: DOUGLAS MCLELLAN AND ALLEN McGILL







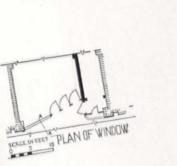


The shop front contains not only the entrance to the store, but that to the building as well. Consequently it was necessary to provide an ample entrance without skimping the show window space. The solution found is most ingenious: strong shapes arrest the attention, and the irregular placing of the cases tends to create interest. The interiors are paneled with wood veneer, and are illuminated by fixtures combining direct and indirect lighting.

PROBLEM: To combine the dominant features of the old Regal stores, which was a Paris green sign distinctively lettered, with those of a modern store on an expensive shopping street.

CONSTRUCTION: Windows have Anaconda sections, Brassco settings. Doors are bronze. Interior walls are paneled in Oriental walnut. Floors are covered with Armstrong linoleum.

# STORES 1. IN NEW YORK CITY HORACE GINSBERN, ARCHITECT

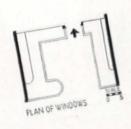


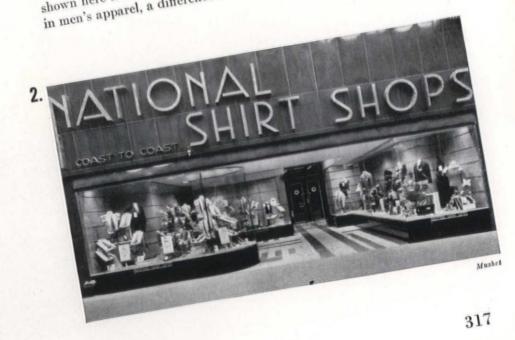






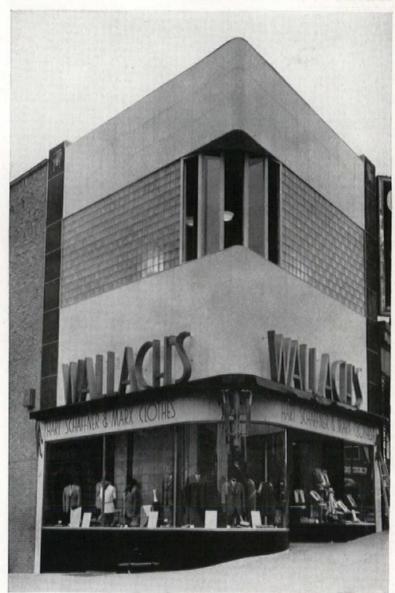
Some of the best architecture of America today is to be found in store front design. The two examples here are representative. Completely suitable for their purpose, attractive in materials and ingenious in arrangement, these small compositions carry a conviction much rangement, these small compositions. The contrast between the shops than that of many larger projects. The contrast between the other shown here is of interest. One deals in small packaged goods, the designs shown here is of interest in function well reflected by the designs in men's apparel, a difference in function well reflected by





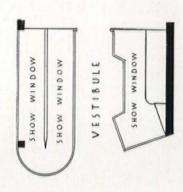
# STORES I, WALLACH'S, NEW YORK MORRIS LAPIDUS, ARCHITECT

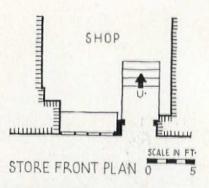
# 2. COLLICE S. HARPER, MILWAUKEE, WIS. GRASSOLD & JOHNSON, ARCHITECT

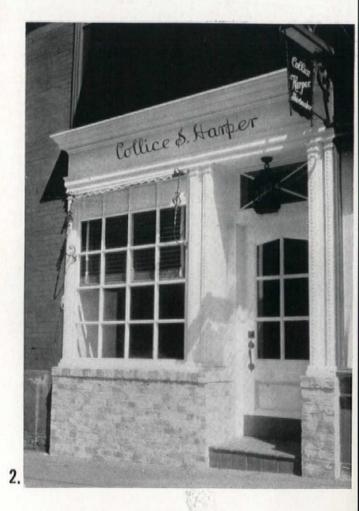


Robert Yarnall Ritchie

- 1. An excellent remodeling job, effectively solving the problem of a store. Uninterrupted show windows provide a maximum of display space upon which attention is sharply focused by the simplicity of the decoration overhead. By night the glass brick walls and show windows are illuminated from within, and the large free-standing letters are silhouetted against the brightly lighted wall.
- 2. A small shop for custom made men's clothes and accessories. The front is of wood enameled white and of brick painted with a light solution of white cement paint. The show window, divided into small panes, and the domestic scale of the facade, are expressive of the nature of the shop. Cost of remodeling: \$600.







# STORE THE PAINT STORE, INC., NEW ROCHELLE, NEW YORK



ELMER LASHER, DANA COLE

DESIGNERS

F S Lincoln Photos





The owner of this store, T. J. Maloney Inc., is an advertising agency handling the Sherwin-Williams Company account. The store is an experiment in realistic testing of merchandising ideas. Like so many retail establishments handling a wide variety of products, paint stores are notoriously unattractive, inefficient. In pleasing contrast is this example. The basement, for instance, is used for displays as well as storage. The stair placed in the center of the store encourages circulation. The gray walls furnish a neutral background for the display of colored pictures. Paint cans are stored in low counters, easy to get at but out of direct sight, an outstanding departure from traditional practice in this field.

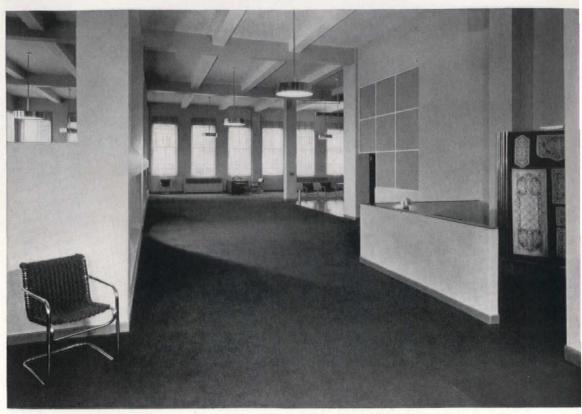
# SHOWROOM PATCHOGUE PLYMOUTH MILLS, NEW YORK

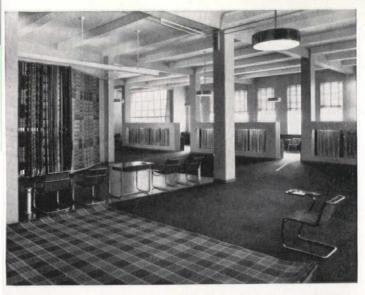


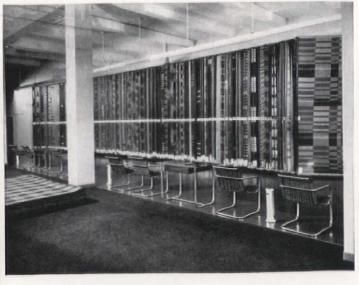
F. S. Lincoln Photos

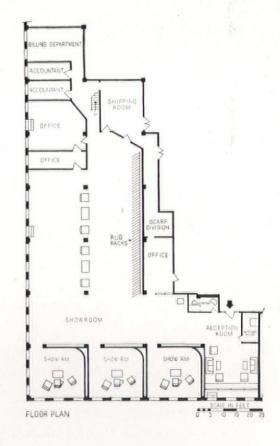
The penthouse of a loft building was selected as a showroom for the products of the Patchogue Plymouth Mills, and the result is an interesting example of the effectiveness with which an unprepossessing interior can be transformed. The changes consisted of a few coats of tan and white paint, carpeting, furniture, display fixtures, the introduction of large fixed windows, and new lighting fixtures. The large windows are used to show various types of curtains, and other displays are placed in cupboards and open racks. A notable feature of the showroom is the way in which displays have been kept out of the main floor area, many being incorporated in the partitions, permitting ease of visibility and free circulation.

#### RUSSEL WRIGHT, DESIGNER









# OFFICES FOR W. S. WASSERMAN CO., PHILADELPHIA, PA.



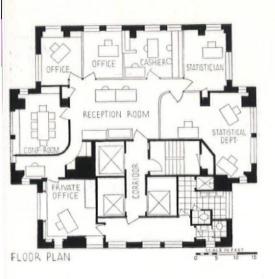
R. T. Dooner Photos

Modern practice in the design of offices has tended not so much to make them more impressive as to strip away useless decoration and to reflect in the design the efficiency of the business. Here, with the directness of a goldfish bowl, the entire working portion of the office has been opened up; low screens of wood are surmounted by large sheets of plate glass which reduce noise to a minimum while letting light penetrate to the interior. Since manufacturers of stock office furniture have persisted, for the most part, in ignoring the obvious trends in design, many of the pieces shown in the illustrations were specially designed and built. Even the lighting fixtures are kept small and unobtrusive, in keeping with the spirit of the establishment. The private offices and the conference room are attractively furnished and void of decoration, except one room which shows a mural map of the world in subdued color.

#### KENNETH DAY, ARCHITECT



OFFICES





PRIVATE OFFICE

CONFERENCE ROOM



# BANK CORN EXCHANGE BANK TRUST CO., NEW YORK CITY

FELLHEIMER & WAGNER
ARCHITECTS



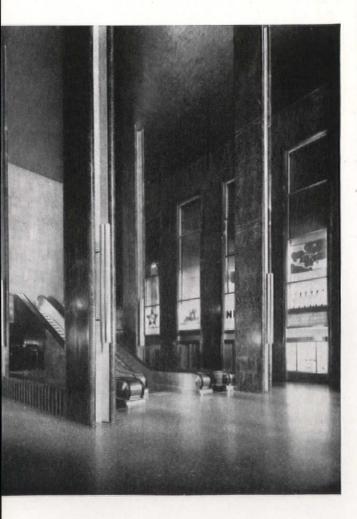
Louis H. Dreyer Photos



Converted in two months from a dilapidated store to a modern branch bank, the Corn Exchange Bank is a straightforward solution to a difficult problem. Owners wanted the front portion of the public banking space two stories high. The architects met requirements by removing the second floor, refinishing structural members. Limitations of cost were satisfied by simple interior and exterior treatment. Glass block set in aluminum muntins provides light for the interior, and improves the appearance of the facade.

# OFFICE BUILDING ROCKEFELLER CENTER, NEW YORK CITY

REINHARD AND HOFMEISTER
CORBETT, HARRISON AND
MACMURRAY
HOOD AND FOUILHOUX
ARCHITECTS

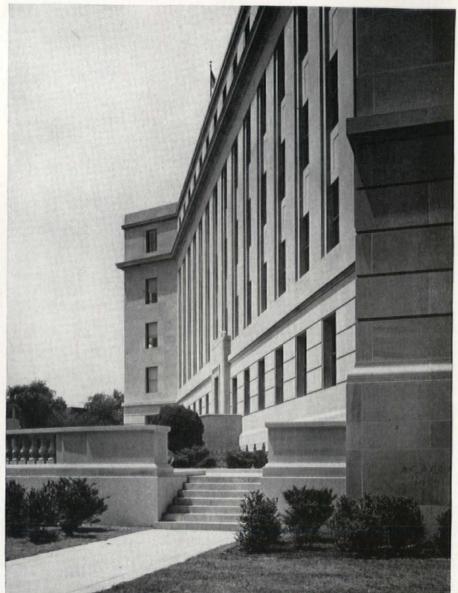




F. S. Lincoln Photos

The International Building achieved immediate distinction by being the only skyscraper office building of the year. This distinction, however, was not its only one, for it was also the second unit in the planned development of Radio City, and a pioneer in the use of selective air conditioning of rented office space. Its very successful design would have attracted more attention had it not been deliberately subordinated to the larger RCA building which preceded it.

# OFFICE BUILDING ACACIA MUTUAL LIFE INSURANCE CO. WASHINGTON, D.C.



SHREVE, LAMB & HARMON, ARCHITECTS

MORTGAGE LOAN

MORTGAGE LOAN

MORTGAGE LOAN

MAIN ENTRANCE LOBSY

POLCY MODERS SERVICE

TREASURY BENETIMENT

CASMICES

TREASURY BENETIMENT

FLOOR PLAN

Three conditions determined the development and form of this building; the manifold operations carried on in the home office of an insurance company, the utilization of an unusual site, and the integration of the design with surrounding monumental government buildings. Expansion has been planned so that the ultimate shape of the building will be a full pentagon. An interesting feature of the construction is that there are no intermediate columns intruding upon the open floor space. This ar-

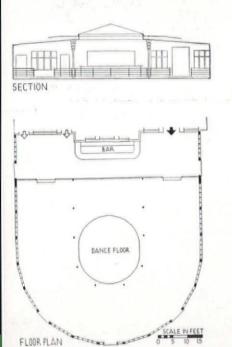
rangement allows greater flexibility of partition location.



### COUNTRY CLUB MONMOUTH COUNTY COUNTRY CLUB, EATONTOWN, N. J.



SCOTT AND TEEGEN, ARCHITECTS



With fairly simple means this addition has been given a light, gay character most suitable to its purpose. There are no shiny metals, no wide expanses of mirror, no lavish use of exotic materials, and in this particular case the job is much the better for it. Situated in the country, the room is open on all but one side. The chief decorative feature is a sliding skylight, designed to look like a striped tent; surrounding the circular opening are slender columns whose frankly unstructural projections are repeated in the flat patterns on the ceiling.





# NIGHT CLUB MAYFAIR CASINO, CLEVELAND, OHIO



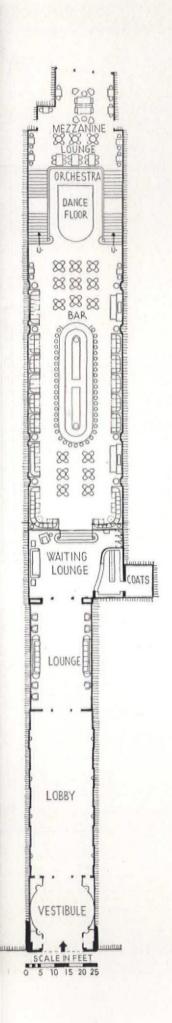
Parade

### COCKTAIL LOUNGE

The transformation of old theaters into night clubs began as an attempt to turn dark houses into profitable properties, and it quickly reached a high point in Manhattan's French Casino, which is still playing to packed houses after several years. Even more ambitious is the Mayfair Casino, an establishment which not only rivals its predecessor in blatancy, but is conceived on an even more ambitious scale. In addition to the table-filled theater, there is a monumental bar of Catalin, seating 97 people, a cocktail lounge, and a Sky Bar, located in the mezzanine of the theater. Construction took only two months, and the entire remodeling was done without the use of plaster and without damage to the original walls and ceiling. A shell of wood was built within the theater, and fabric was stretched over it for a surface, with a backing of Sheetrock which extends to 8 ft. above the floor.



### ESSMAN, INCORPORATED, DESIGNERS

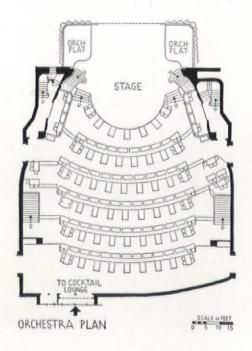


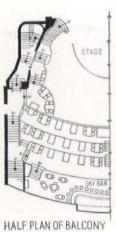


SKY BAR

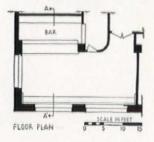


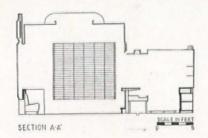
COCKTAIL LOUNGE FROM MEZZANINE











A small hotel bar, exhibiting many of the features of similar recent work. Lighting is direct and indirect, ventilating grilles are worked into the design, furniture is simple, and glass is used in a decorative manner. In its restraint and in the simple use of wood, plaster, and metallic surfaces, the room is excellent.

### CONSTRUCTION OUTLINE

FLOOR: Covered with Sealex blue linoleum, Congoleum-Nairn, Inc. CEILING: Covered with Gold Leaf paper. Dome-

covered with Silver Leaf.

WALLS: Covered with Avodire Flexwood veneer, U. S. Plywood Co., Inc., natural finish, shellacked and rubbed down to a smooth, flat finish.

WOODWORK: All trim and doors covered with Flex-wood. Bar-top—natural color mahogany covered with a coat of alcohol-proof finish. The front side of the bar covered with single strip of imitation leather, L. C. Chase & Co., stretched over padding, finished at the bottom with 4 in. kickplate of chromium-plated metal. Riser and tread of step covered with linoleum.

MIRRORS: Blue glass over back of bar. All others clear glass, 4 in. wide, beveled and polished.

HARDWARE: Brushed finish, chromium-plated metal. FURNITURE: Built-in seats-built to detail, spring seats and backs, padded with hair, upholstered in imitation leather.

# industrial





TOWARD



A decorative architecture striving to adapt itself to the basic requirements of use finds it impossible to follow academic preconceptions.

The industrial center as the tyrant of the society that created it. Man awed and perplexed by this rapid and tremendous growth in the standard of power, strength, and acceleration.

Society ignores the demand for a destylized architecture. It is interested only in the efficiency and infinitesimal accuracy of scientific appliances, not in the effort required to solve the problems brought about by these newly discovered forces.

The factory prolific in the production of ingots, motors and slums.

Mass production, standardization and technology are terms to be feared since they are not understood: plants, factories, and mills grow unbridled wherever transportation, land values, and labor prove more advantageous.

The industrial planner realizes that efficient productivity is dependent upon the availability of:

Safe and sanitary working conditions.

Standardization of parts.

Maximum use of research and experimental work in laboratories.

Flexibility of planning—to allow for changes resulting from obsolescence in production methods and equipment.

Use of automatic processes in "straight line" procedure.

Adequate heating, lighting, and air conditioning.

Elimination of the multi-storied structure.

In order to achieve these results an industrial type of design evolves, creating its own so-called style from materials, processes, and scales for which there exists no precedent. This now recognized architecture pioneers in the use of new materials such as glass block, tiles, steel and aluminum alloys; it has shown us the useful and esthetic value of the unornamented wall surface, so much so that these industrial units, formerly considered unavoidable eyesores, now assume their proper place on the building horizon. Above all, it has been the most important agent in the adoption of air conditioning, glareless and evenly distributed lighting and other scientific developments toward healthier living surroundings.

Industry enters an experimental stage of decentralization acting upon the premise that small units located in or near rural areas will eventually prove more practical and economical and more desirable socially than the present urban plant.

### **FACTORIES**

Plant production is equally affected by equipment, power control, handling, and buildings. All of these factors are correlated in order to create a factory of maximum efficiency. Good industrial architecture insures the solution of the mechanical problem and the comfort of the worker. The industrial center formerly planned in a haphazard manner, due to lack of experience, is now planned wholly as a functional unit.

The efficiency of "straight-line" production has been amply substantiated, and the typical plant of today takes the delivered raw material to the outgoing finished product in an uninterrupted production stream. The success of this process has brought about the almost complete elimination of the multi-storied structure, although intermediate levels are still mandatory for offices, laboratories, and handling. The low pitched ramp is favored over the dangerous staircase and slow moving elevator in providing access to the various levels.

Increased means of transportation and the fact that the majority of factories have their own independent storage and power units allow full option of location and decentralization of industrial centers.

Worker comfort has been translated into architecture by an increased use of glareless daylighting and scientifically designed adaptations of mercury vapor lamps for even and well-distributed artificial lighting. Ducts, leaders, and conduits are, whenever possible, carried within the structure in order to eliminate the disordered look and dust-catching surface. Air conditioning is required for work and worker alike. Recreational and sanitary elements have, with exterior landscape treatments, redeemed the factory.

The rigorous requirements of planning have created the standard partition, the glass wall, the light steel structure and the application of non-corroding surfaces in metal alloys and synthetic materials.

#### FOOD PACKING PLANTS

The principle of gravity feeding is used almost exclusively. Batteries of large machines are planned and installed to allow the most direct evolution in the production schedule, from unloading, trough washing, grading, preparing, preserving, and canning, to labeling, case filling, storage, and delivery.

#### ICE PLANTS

The small automatic ice making unit has reduced the average daily production of ice plants from fifty to twenty tons. In order to neutralize this deficiency, the refrigeration industry has developed several allied ramifications which serve an increasingly important number of purposes such as: ice-cream and frozen food plants, research laboratories, etc. Ample window area in this type of building has been recognized as mandatory in the manufacture of sanitary products, in the maintenance of the mechanical equipment, and in the prevention of accidents. Great care is employed in the selection of insulating materials, since their function is to resist the absorption of moisture and heat. The cooling tower has replaced the pipe corroding spray pond.

#### PRINTING PLANTS

The straight line production processes are used exclusively, involving sequential planning from type setting and hand composition into the press room, and thence to the bindery and finishing departments.

#### PAPER MILLS

The basic operations affecting the planning of paper mills may be divided into two general headings: direct operations made up of the storage, preparation, and defibration of pulpwood; the screen, mixing, and classification of various fibers; the felting, dehydration, and drying of the fiber into paper; the finishing, packing, and shipping facilities. The indirect operations comprise the storage and handling of secondary materials and supplies, the services composed of highly specialized equipment in heating, lighting, repairing, and power transmission; the managerial and control offices, which must be soundproofed from the machine room.

### CLEANING AND LAUNDRY PLANTS

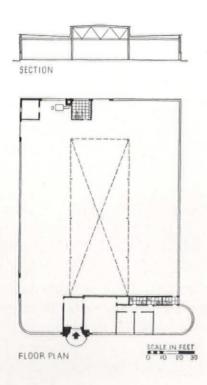
These structures are invariably of fireproof construction. The nature of the work demands from the plan ample accommodations for the installation of large tanks, vats, and drying machines.

# FACTORY ALLEN CORPORATION, DETROIT, MICHIGAN



Heiser Co.

THE AUSTIN CO., ENGINEERS



This example illustrates the increasing tendency on the part of manufacturers to build small factories whose attractive appearance results from a frank acceptance of logical requirements. Useless excrescences which have characterized much of the past work in this field are rapidly being eliminated. This building shows the result of such intelligent planning. The simple, clean facade expresses the utilitarian character of the work within and admits the maximum quantity of natural light. An interesting change in the scale of the fenestration indicates the dissimilar operations carried on in the factory and office space.

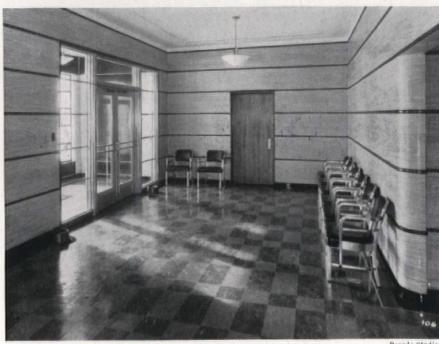
### FACTORY ELECTRO-MOTIVE CORPORATION, LAGRANGE, ILLINOIS



Heiser Co

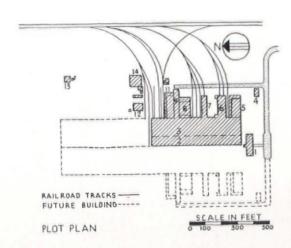
Completion of this plant, the first finished Diesel locomotive works in the world, took nine months, setting a new pace for construction of this type. The nine buildings which compose the plant have welded frames: much of the welding was done in the fabricating shop and shipped to the job in a finished state. The plan has been arranged to accommodate shops four times the present size without augmenting the service facilities. The building above serves as business and engineering offices for the company. It is completely air conditioned, and contains kitchens and a cafeteria for workers and executives.

### THE AUSTIN COMPANY, ENGINEERS AND BUILDERS



RECEPTION ROOM



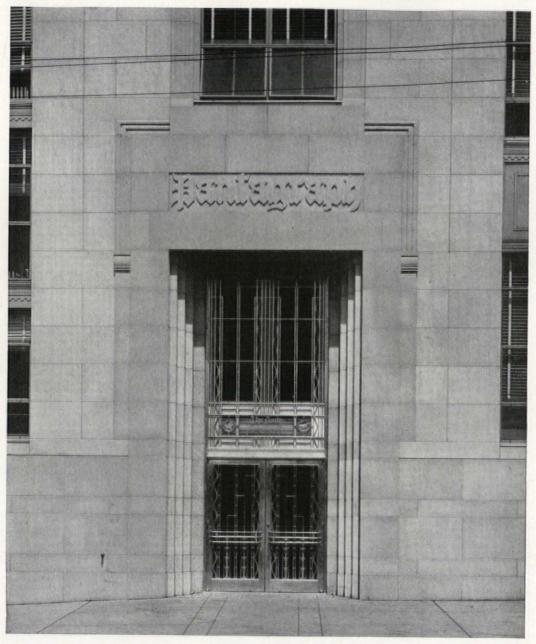


1. OFFICE BUILDING 2. MACHINE SHOP 3. EREC-TION SHOP 4. EMPLOYMENT OFFICE 5. PARTS DEPARTMENT 6. PAINT SHOP 7. SAND BLAST 8. BLACKSMITH'S SHOP 9. ANNEALING OVEN
10. GARAGE 11. WAREHOUSE 12. BOILER HOUSE
13. SEWAGE DISPOSAL 14. RESERVOIR



MACHINE SHOP

# NEWSPAPER PLANT THE DAILY PANTAGRAPH, BLOOMINGTON, ILLINOIS



A complete newspaper office, with engraving plant, presses, offices, and a large morgue. The engraving plant is probably the most modern of its kind to be maintained by a paper of the Pantagraph's size. All machinery is finished with aluminum paint. The fenestration suggests the combined office and shop character of the plant, and in the press room the windows are increased considerably in size. A prominent feature of the public space on the first floor is a map painted on glass and illuminated from behind, showing the extent of the newspaper's circulation. The departments have been designed for expansion within the building, and foundations and walls will carry an extra story if it is needed. The assignment presented unusual structural difficulties, because the new building had to be constructed on the same site as the old without interrupting the daily appearance of the paper. Construction took about a year, cost about \$200,000.



### JAMES WILLIAM THOMAS, SCHAEFFER & HOOTON, ARCHITECTS



OFFICE



ENGRAVING ROOM



COMPOSING ROOM

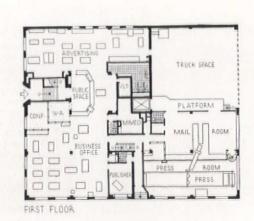


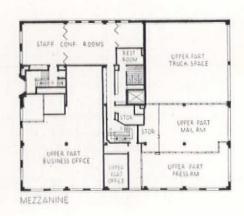
PAPER STORAGE

PAPER STORAGE

PRESS

STEALD | DEPT | DEPT





337

# PRINTING PLANT CLARKE & COURTS, HOUSTON, TEXAS

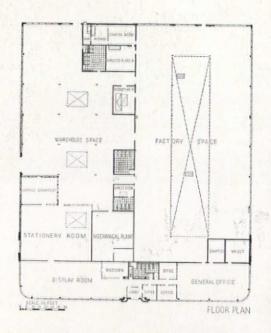


Cecil Thomson Photos

### JOSEPH FINGER, INC., ARCHITECTS



The design of structures to house printing establishments places stringent demands on the technical resources of the architect. Strength to resist heavy press vibration; the ability to maintain uniform humidity; maximum light area for work, are part of the specialized building requirements. All of these conditions are successfully fulfilled in this monolithic concrete building. Special precautions were taken to eliminate expansion cracks. Shellacked plywood lined forms gave a smooth exterior wall on which decoration and letters were formed with plaster waste molds.



#### CONSTRUCTION OUTLINE

STRUCTURE: Walls-Monolithic concrete. Interior partitions-hollow clay tile. Columns: Interior-steel; exterior-concrete, Steel beams and Truscon open trussed joist for roof framing. Floor-concrete slab on

grade. ROOF: Thermax, 3 in. thick, asphalt and gravel roof-

ing. Skylights—Vent-o-lite, copper flashing. WINDOWS: Sash—steel, Truscon Steel Co. Glass— Coolite, Pittsburgh Plate Glass Co.

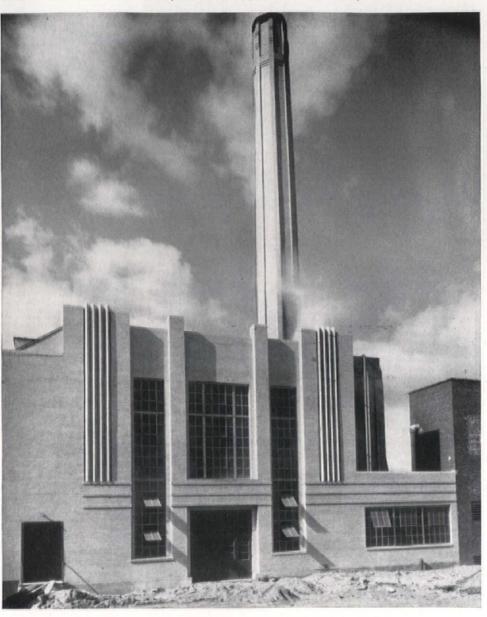
FLOORS: Cement floor throughout factory, Terrazzo in display portions and asphalt tile for offices.

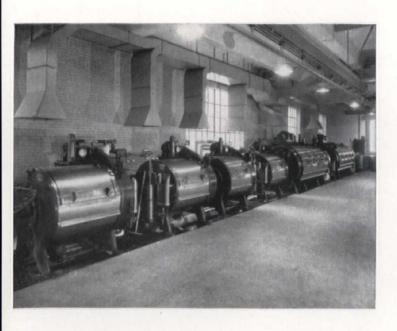
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—heavy cast iron. HEATING AND AIR CONDITIONING: Steam boiler,

gas fired. Provision made for future air conditioning.

### LAUNDRY KNICKERBOCKER LAUNDRY CO., LONG ISLAND CITY, N. Y.

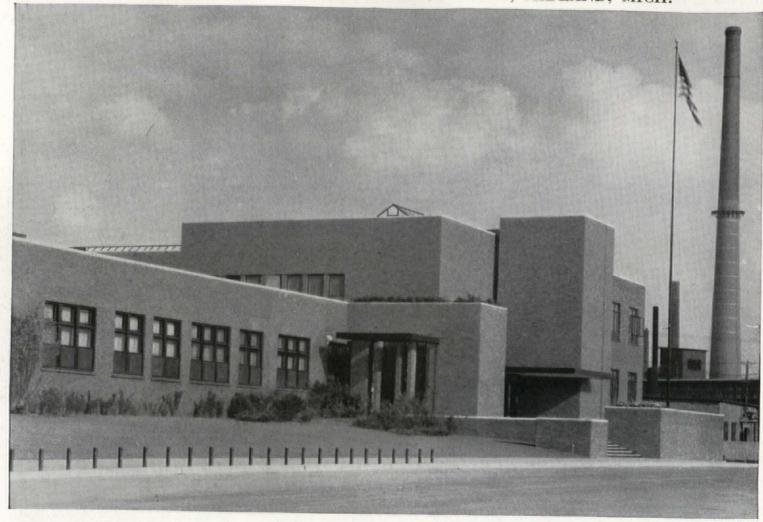
IRVING M. FENICHEL ARCHITECT





The Knickerbocker Laundry, located near the tracks of the busy Long Island Railroad, was designed to reflect the cleanliness and efficiency of the operations within. A far cry from the super-heated atmosphere of most laundry interiors, the entire building is air conditioned. Equipment laid out on continuous flow production lines facilitates the routing of work and materially increases production. A visitors' gallery overlooks the main workroom and adds to its value as a show place; makes it unnecessary to admit sightseers at main floor level.

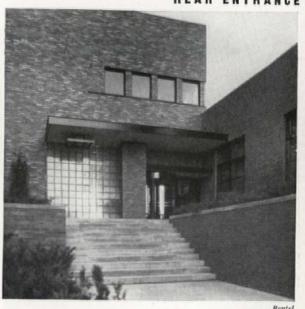
# OFFICE BUILDING DOW CHEMICAL COMPANY, MIDLAND, MICH.

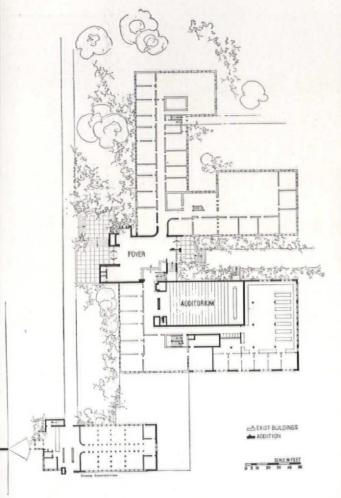


Beute

The building shown here is an addition to existing plants, interesting for the ingenious way in which it ties up the two formerly isolated structures and creates a workable plan. The exterior is composed entirely of rectangular blocks, using brick as a means of producing a wall texture. The regularity of the elements is in complete accord with the building's function, and its directness is its most outstanding characteristic. The partition design is unusual, with glass running up to the ceiling to transmit a maximum amount of light.

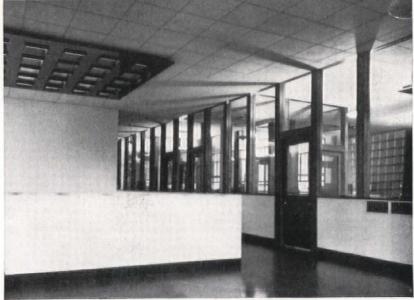
### REAR ENTRANCE







ENTRANCE LOBBY



STAIR HALL AND OFFICES



DRAFTING ROOM

#### CONSTRUCTION OUTLINE

FOUNDATION

Poured concrete walls and footings.

STRUCTURE

Steel construction throughout with brick exterior walls and Magnesite finish floors inside.

Built-up asphalt roofing.

WOODWORK

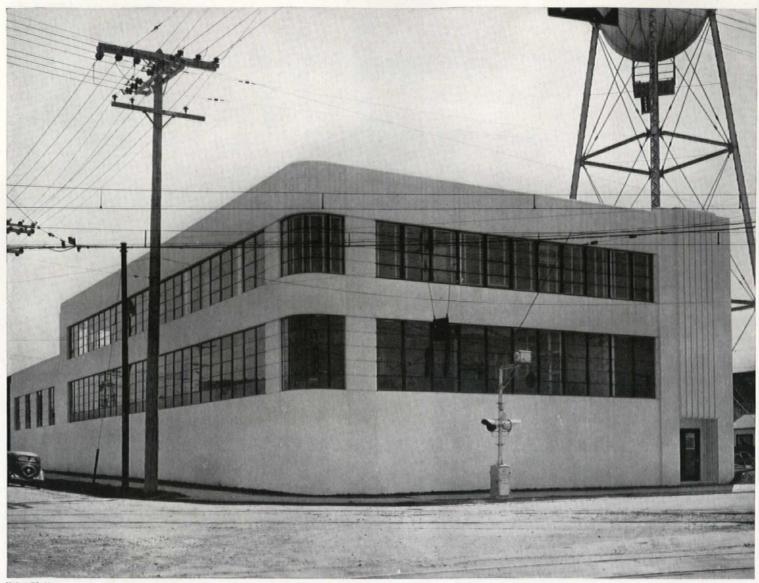
Woodwork and finish trim-birch throughout.

PAINTING
Interior walls—natural finish. Interior woodwork—dark

SOUND INSULATION

Acoustex blocks, 2 ft. sq., in office space.

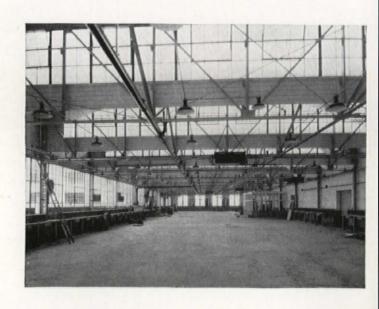
# FACTORY PACIFIC MANIFOLDING BOOK CO., EMERYVILLE, CALIFORNIA



Heiser Photos

THE AUSTIN CO., ENGINEERS

The location of factory buildings in industrial areas frequently exposes the workers to noisy and dangerous distractions. Under such conditions careful work becomes almost impossible in ground floor locations. In this plant the designers have met the problem by elevating all windows to a level well above street confusion. The exterior treatment is direct and simple as it should be.



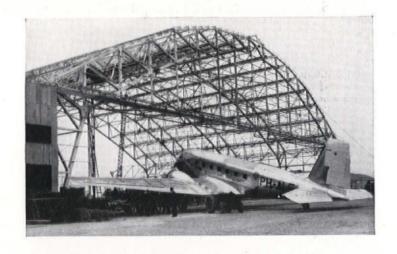
## FACTORY DOUGLAS AIRCRAFT COMPANY, SANTA MONICA, CALIF.



Spence Air Photos

EDWARD CRAY TAYLOR AND ELLIS WING TAYLOR ARCHITECTS AND ENGINEERS

F. W. CONANT, ARCHITECTURAL SUPERVISOR



The Douglas Company's new plant includes a factory and a flying field, and embodies the latest trends in airplane manufacturing. Industrial efficiency is attained by sound functional planning. The dramatic quality of the plant results from its structural form alone. Because of its size the hangar used for the final assembly of transport planes presented many structural problems, a major one being how to insure adequate light. This was solved by setting continuous windows in a saw-tooth roof supported by arch trusses.



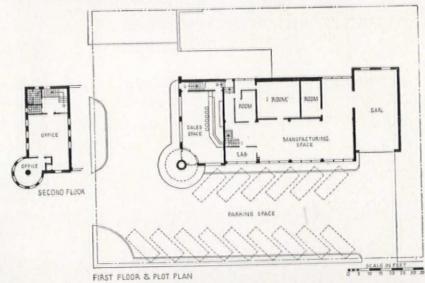
Spence Air Photos

## FACTORY MILWAUKEE, WIS. GRASSOLD AND JOHNSON, ARCHITECTS





PROBLEM: To design a small factory building which includes retail sales space, the whole to be a dignified and effective advertisement for the company.



The plan, with its varying requirements of sales space, a large area for manufacturing, and offices, is interesting. The larger part of the building is given over to the machines for making ice cream, with the attached garage serving also as a delivery entrance. A second floor contains the two offices, effectively separated from the rest of the building. Ample parking space and an attractive sales room with a soda fountain have been installed for the buying public. The color scheme throughout is chocolate and cream, and the facing is of cream-colored terra cotta. Cubage: 80,000 feet. Cost: \$32,000 at 40 cents.

### OUTLINE CONSTRUCTION

FOUNDATION: Reenforced concrete throughout. STRUCTURE: Exterior walls-2 in. terra cotta facing and clay tile back-up. Inside plastered. Columns and floors-reenforced concrete.

ROOF: Built-up 3-ply roof flat, laid on 1 in. Celotex direct on concrete roof slab.

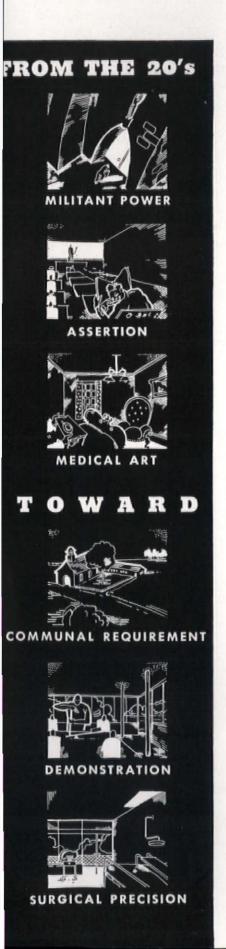
FLOOR COVERINGS: Store and offices-rubber. Factory-quarry clay tile. Toilets-Ceramic tile.

PAINTING: Walls, ceilings and sash-white lead and

PLUMBING: All fixtures by Kohler Co. Soil and vent pipes-cast iron and galvanized, National Pipe Co. Water supply pipe—copper. HEATING: High pressure steam, oil burner. Thermo-

stats-Minneapolis-Honeywell Regulator Co.

# institutional



The bleak, severe architecture originally conceived in a spirit of awe and fear is still adapted, seldom understood. These styles which originated as community enterprises demanding the cooperation of all hands are still used extensively to give churches of all denominations the accepted exterior vestments. Actual plagiarisms are rare, but the bold implications of the Gothic, the rhythmical grace of the Classic have not yet been replaced. The general trend for organization has changed the complexion of the church from a purely spiritual and esoteric power into an educational requisite. Recently built church groups include such elements as assembly rooms, dining halls, club rooms, and general recreational facilities. Furthermore, the flickering tallow candle, and the coldness pouring down from damp vaults have been replaced by the less dramatic but far more comfortable glareless lighting and central heating.

The unattractive countenance of "Fact Absorption," translated by an architecture of repetitious cubicles, blackboarded, gloomy, and offering to the eye tiered alignments of uncomfortable desks, undergoes a metamorphosis toward a more pleasant program of Group Activity. The teacher changes from a Master to a Leader. In the construction of school buildings, by incorporating contemporary developments in mechanical equipment and materials, designers have produced group units of rooms in sequence and correlation to each other and to external dependencies, such as sun terraces, playgrounds, and natural surroundings. The public high school and the college are becoming more conscious of their obligation to the community. Auditoriums, gymnasiums, and lecture rooms are designed for the two-fold purpose of serving both student and citizen in a recreational as well as educational capacity.

Because it has required from its architecture the incorporation of contemporary developments in the field of engineering and science, Medicine, perhaps more than any other profession, has been instrumental in developing a contemporary architecture. Hospitals are designed solely on a basis of functional and organic use. Ducts and conduits, solariums and special treatment units, radiology and research laboratories, all are comparatively recent elements which cannot be made to fit within the traditional concept.

#### CHURCHES

Last to submit to changed forms, the church, regardless of denomination, is realistically facing its new communal requirements. A broader concept of the relation of the church to the community has introduced almost universally such new functions as restaurants, kitchens, classrooms, gymnasiums, and auditoriums. Within the church proper, the most important change is shifting the choir stalls and organ from their position of prominence to a more subordinate one out of view of the congregation.

#### SCHOOLS

The modern educational program is changing school needs so that planning requires flexibility of class room size for varied use by means of movable partitions; rooms opening on outdoor areas for primary children; provision for use of mechanical equipment such as motion pictures; use of ramps instead of stairs and special fire and earthquake construction to ensure safety; roof space for play, sun bath areas; the community utilization of auditorium, gymnasium and work shop necessitating separate entrance and adequate circulation for overlapping functions. Great attention is being given to eliminating traffic hazards in some cases by providing underpasses at congested crossings.

#### **AUDITORIUMS**

Community use demands provision for adjacent kitchens, rehearsal, dressing, costume, and stage workshop rooms; smaller club rooms, and large areas to store temporary seats when unobstructed floor is required.

#### MUSEUMS AND ART GALLERIES

The scientific study of exhibition has resulted in erection of movable partitions to change room circulation, provide correct background, and direct attention to the display. Natural and artificial overhead lighting by indirect methods gives proper object illumination. Flexibility of wall hanging attained by installation of channel picture molding at various heights. Awakening community interests have led to corralling art and museum activities into art centers. This creates imperative need of careful planning for circulation of overlapping functions, provision for study use of stored materials by ready-reference facilities such as swinging files and catalogued cases; special kitchen and toilet facilities adjacent to small exhibits and lecture rooms.

#### GYMNASIUMS

Provision for rounded physical education program demands a building divorced from auditorium uses, housed in separate wing to make use of great windows and skylights for light and necessary ventilation, absolute minimum of stairs, first floor dressing rooms with exits at grade level to playing fields and gymnasium, recessed wall spaces for movable partitions so spectator vision is unobscured, permanent balconies and swimming pool located in separate wing, correlation of lecture, examination, and adequate locker and shower rooms with swimming pool, and main gymnasium and equipment facilities for smaller groups to insure adequate exercise participation at all times.

### HOSPITALS, SANITARIUMS AND CLINICS

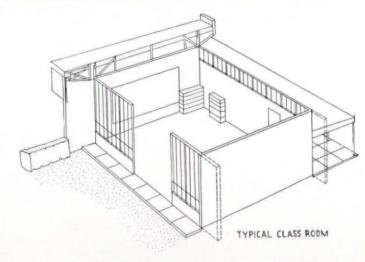
Circulation emphasis in hospitals based on movement around the patient and, in sanitariums and clinics, moving the patient from one specialized ward to another, is making a marked differentiation in the planning of these institutions. Small, semi-private units are replacing the vast clinical ward. Extensive sun porches and almost unlimited use of glass areas both for sunlight and partitions for better interior observation by medical force are currently favored.

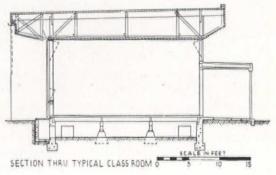
# SCHOOL BELL, CALIFORNIA, RICHARD J. NEUTRA, ARCHITECT



Luckhaus

This now famous "Test Tube" elementary school, constructed as an experimental building by the Los Angeles Board of Education, has been in use for a year. Completely modern in conception, and designed to make available to children and teachers every possible facility, the building has been studied by educators and architects from all over the U.S. The report of the school authorities after five months of operation stated that "while there may be some objection to certain features of the new building, they are of a decidedly minor nature . . . A school has at last been built which is a distinct improvement from the standpoint of health, safety, and educational opportunities."

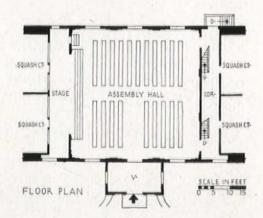




# AUDITORIUM BROOKS SCHOOL, NORTH ANDOVER, MASSACHUSETTS



Arthur C. Haskell Photos

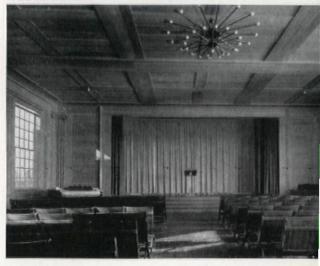


Following a strong local tradition of wood architecture, this addition to a preparatory school solves its essentially modern problem of providing for an auditorium and four squash courts without doing violence to the architectural program. Large windows indicate the location of the auditorium, and the spaces occupied by squash courts are left blank on the exterior. The interior is an attractive room paneled entirely in wood.

COOLIDGE, SHEPLEY, BULFINCH AND ABBOTT, ARCHITECTS



AUDITORIUM



# SCHOOL HUNTINGTON, LONG ISLAND, NEW YORK, GUSTAVE STEINBACK, ARCHITECT



Murray M. Peters Photos





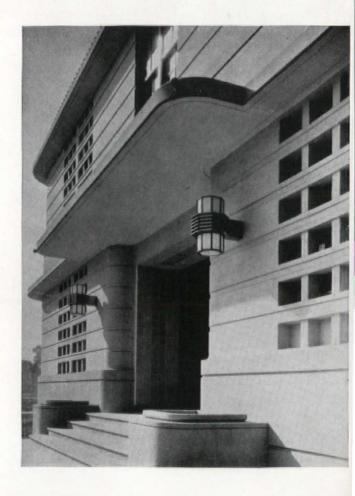
A District Grade School accommodating about 135 pupils, the building has also been planned for use as a community center. Surrounded by large estates, the school was designed to avoid an institutional appearance. A domestic character has been attained by breaking up the mass with different roof treatments, and by the use of small windows and dormers. The plan functions easily, and has been well adapted to the varying uses of the building. Cost: \$62,059. Cubage: 195,000 at about 32 cents.

### SCHOOL FOR MANUAL ARTS, LOS ANGELES, CALIFORNIA



W. P. Woodcock

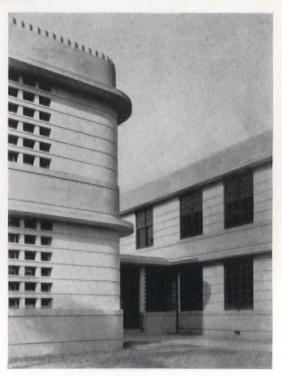
The earthquake of 1933 which destroyed or damaged a great number of California schools has resulted in the most comprehensive program of school building ever seen in the U. S. The new schools are all uncompromisingly modern in design, a situation due to the new regulations forbidding the use of cornices, projecting ornament, decorative towers and any other nonstructural features which might prove dangerous to life and limb in a quake. Curiously enough, this governmental restriction on private architectural initiative has resulted in an improvement in the quality of design. The present example is interesting in its use of strong horizontals and of forms which emphasize the plasticity of the material. The plan is simple in the extreme, indicating how completely the functional aspects of a school have come to control the design. The building was financed largely with PWA funds.

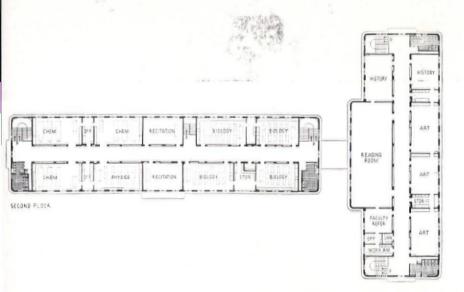


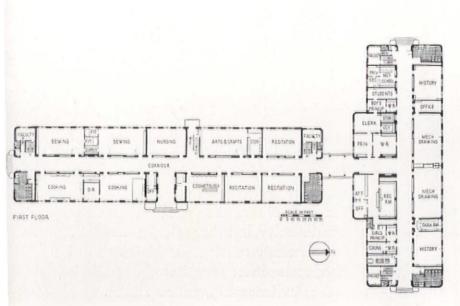
### JOHN PARKINSON & DONALD B. PARKINSON, ARCHITECTS











### CONSTRUCTION OUTLINE

#### FOUNDATIONS

Footings-reenforced concrete pads under columns, continuous spread footings under walls. Walls-12 in. reenforced concrete. Waterproofing-Hydratite, A. C. Horn Co.

### STRUCTURE

Exterior walls-reenforced concrete, special design. Columns-reenforced concrete. Interior partitionssteel furring channels, metal lath and plaster. Floor construction-reenforced concrete Joist system with removable steel pans. Suspended metal lath and plaster ceilings.

#### ROOF

Structure-same as floors. Five-ply composition roofing, Certain-teed Products Corp.

### SHEET METAL WORK

Flashing-16 oz. hard copper attached to concrete with expansion nails. Gutters—copper. SOUND INSULATION

#### Acoustic plaster on classroom ceilings, Kalite, Certain-

teed Products Corp. WINDOWS Sash-double hung wood. Glass-26 oz. Pittsburgh Plate

Glass Co. FLOOR COVERINGS

Cement finish in corridors, linoleum in classrooms, tile in toilet rooms, Gladding McBean & Co. WOODWORK AND SPECIAL TRIM

### Trim and doors-Douglas fir.

#### PAINTING

Interior walls in corridors and toilet rooms—paint, W. P. Fuller & Co. Trim and sash—stain and varnish. Exterior walls—Cemelith cement paint.

#### **ELECTRICAL INSTALLATION**

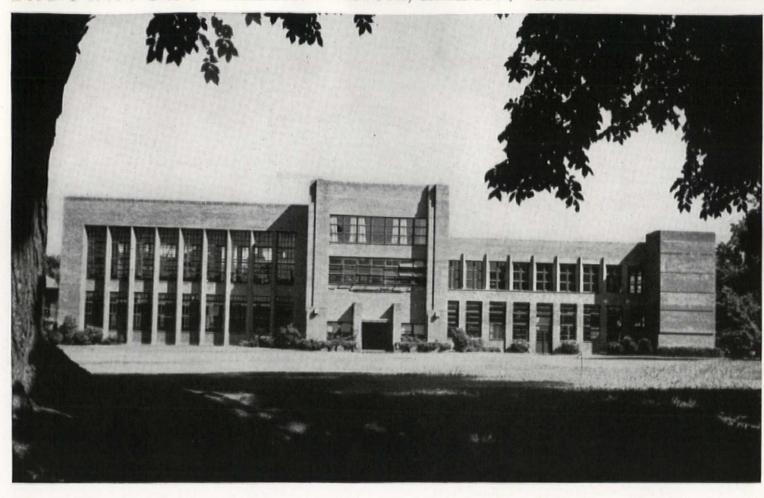
Wiring system—rigid conduit throughout, Switches—type A switching, Square D. Mfg. Co. PLUMBING

All fixtures by Standard Sanitary Mfg. Co. Soil pipecast iron. Water supply-Reading wrought iron. HEATING

High pressure steam, supplied from existing plant. Radiators—both wall and tube type, Crane Co., Kennedy valves. Regulators—Marsh Regulator traps,

Illinois Pressure reducing valves.

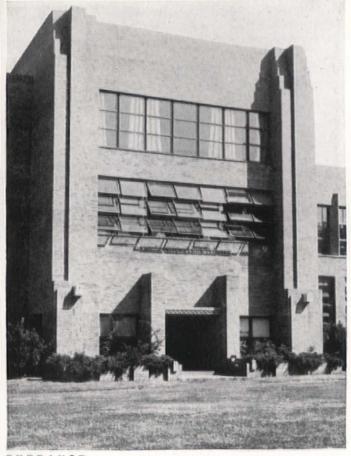
### LABORATORY HAMPTON INSTITUTE, HAMPTON, VIRGINIA



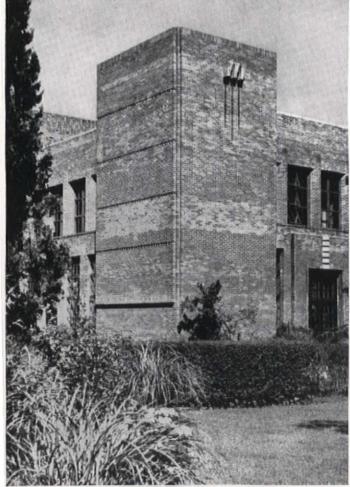
The architect: "The problem of designing a structure devoted to instruction in the building trades offered a unique opportunity; a challenge, in fact. Obviously eclecticism was out." The program: Bricklaying and plastering shop, plumbing and steamfitting shop, carpentry shop, structural testing laboratory, offices, drafting rooms, classrooms, blueprint room, exhibition space for building materials. The program offered no uncommon difficulty, but the requirement that the building be designed in such a manner that it could be successfully constructed by the students was another matter. The building that resulted not only possesses obvious architectural merit, but served its purpose as a unique and valuable experience for students and architects alike.

### THEO BALLOU WHITE, ARCHITECT

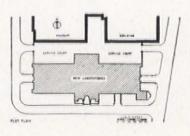
### ALEXANDER B. TROWBRIDGE, CONSULTANT

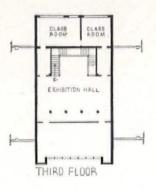


ENTRANCE

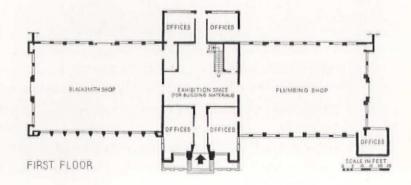


SOUTH EAST TOWER







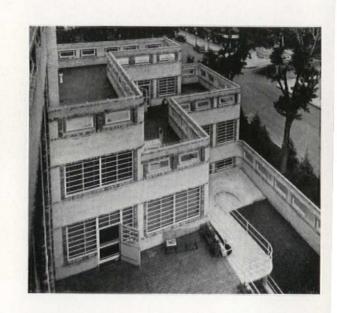


# HOSPITAL CHILDREN'S HOSPITAL, DENVER, COLORADO

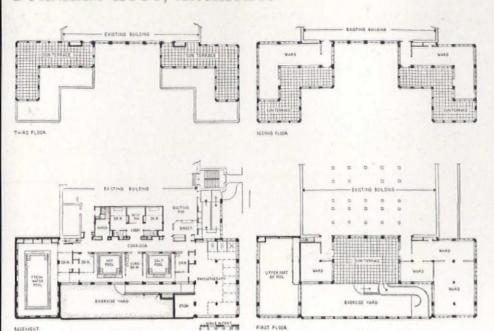


William L. Ford Photos

This new hospital, designed as an addition to the existing Tammen wing of the Denver Children's Hospital, besides possessing outstanding architectural merit, is probably the finest institution of its kind in the country. Gift of Mrs. H. H. Tammen of Denver, the building was planned to increase existing ward space, to house recreation and school rooms, and to provide for heliotherapeutical, hydrotherapeutical, and physiotherapeutical units. No cost limitations were set by the donor. The building has a character quite unlike that of anything previously built in the U.S., and has a consistency of scale which is due chiefly to the use of projected type windows. The total cost of the addition was \$201,893. Cubage, including decks: 198,034 at \$1.02.



### BURNHAM HOYT, ARCHITECT



### CONSTRUCTION OUTLINE

#### STRUCTURE

Exterior walls-special glazed brick, steel construction, columns fireproofed with concrete and plastered.

ROOF

Sun decks-2 in. Thermax insulation, membrane waterproofing, finished with red split paver brick.
INSULATION

Walls—1 in, Celotex behind radiators and in dead air spaces, Sound insulation—Acoustic Celotex ceilings in wards, cork ceilings in hydrotherapy and physical therapy units. WINDOWS

Ventrolite steel, Security Products Co. Glass-quality A, 1/4 in. plate. Bronze screens.

FLOOR COVERINGS

Wards, corridors, auditorium, library and classrooms—No. 20 Battleship linoleum,  $\%_6$  in., Armstrong Cork Products Co. Dressing rooms, toilet rooms, utility rooms and diet kitchens-Terrazzo. Physical-therapy

room floor—Armstrong's cork tile, ELECTRICAL INSTALLATION Fixtures—specially designed, open inner-mirrored bulbs in recessed reflectors, Sechrist Mfg. Co.

PLUMBING

Fixtures—Crane Co. Soil and waste pipes—extra heavy cast iron. Vent pipes—galvanized iron. Water supply pipes-copper tube.

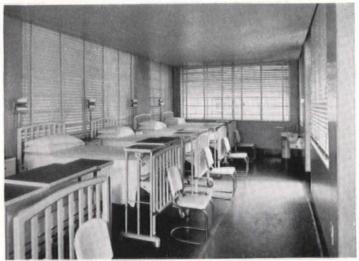
HEATING AND AIR CONDITIONING Heating—vapor, Filtered forced air system, Radiators— copper fin, concealed, Trane Co. Valves—thermostat control, Johnson Service Co. system.



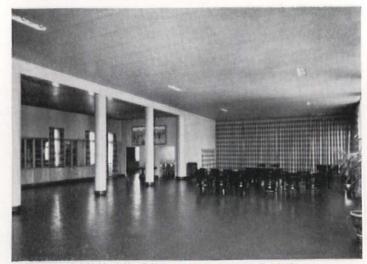
FRESH WATER POOL



PHYSICAL THERAPY UNIT



PICAL WARD



AUDITORIUM IN EXISTING BUILDING

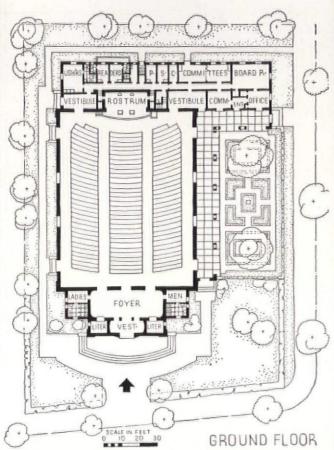
# CHURCH OF CHRIST SCIENTIST, LOS ANGELES, CALIFORNIA MAHMAUS



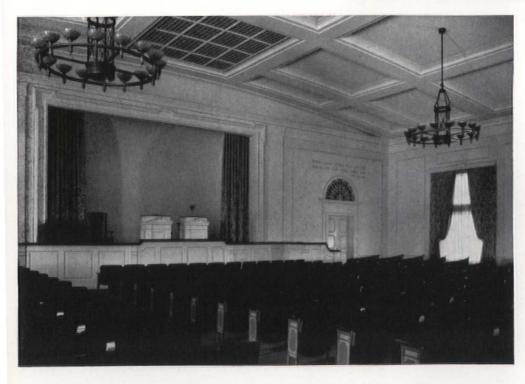
George D. Haight

The Church of Christ Scientist is fortunate in its lack of an ancient building tradition and has been wise in its avoidance of the usual ecclesiastical styles. As a result of this policy the denomination has come to be represented by a series of simple, dignified structures, of which this new church in Los Angeles is an excellent example. The architect has solved his problem in a straightforward, unpretentious manner. A direct plan is clearly expressed by the simplest of masses, and the roof treatment and handling of the large wall surfaces are most successful. The services, which are few in number, are concentrated in the rear of the property, and, with the church itself, form a small patio, most agreeable in this climate. The interiors are carried out in the same modified classic manner as the exterior, echoing its pleasant whiteness and simplicity of form.

### H. ROY KELLEY, ARCHITECT







### HOME FOR OLD LADIES, HINSDALE, ILLINOIS



Hedrich-Blessing Photos

PROBLEM: To design an old ladies' home whose character is intimate and homelike, avoiding as far as possible the institutional atmosphere.

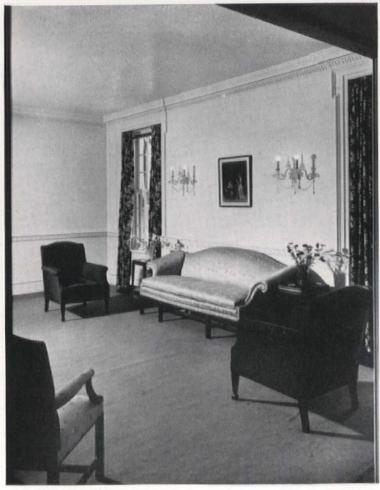
A fairly large establishment, containing living quarters, common rooms for dining and entertaining, service buildings, and a hospital wing, this old ladies' home solves its problem well. While maintaining the homelike character desired, the group as a whole is broadly handled, striking a nice balance between the residence and the institution. The buildings are Colonial in style with masonry walls faced with a veneer of Wisconsin limestone. In addition to the lounge, living room, and library on the first floor there are also a number of sitting rooms of moderate size on the second floor. Also provided are several large screened porches. The common rooms are paneled chiefly in wood, the lounge shown on this page having walls of knotty pine and a trussed wood ceiling. The cost of the buildings, exclusive of furnishings and special equipment, was \$560,288. Total cost, excluding roads and grading: \$572,705.



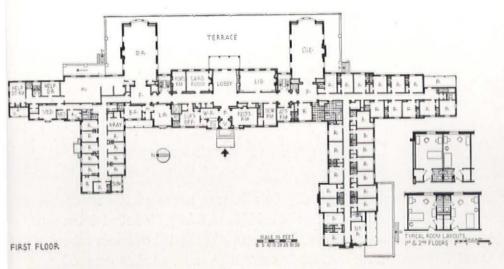
### ANDERSON AND TICKNOR, ARCHITECTS



TERRACE



LIVING ROOM



#### CONSTRUCTION OUTLINE

FOUNDATION: Poured concrete, walls continuous. Waterproofing-2 coats emulsified asphalt.

STRUCTURE: Exterior walls-Wisconsin veneer backed with common brick or shingles nailed to 4 in. Haydite brick veneer backed with common brick. Interior partitions—hollow clay tile plastered with Gypsum plaster. First floor construction—poured concrete Joint pan construction supported on steel beams. Ceiling—Diamond mesh metal lath plastered with Gypsum plaster. ROOF: Steel, cement tile, roofing felt and clay shingle

tile from Ludowici-Celadon Co.

SHEET METAL WORK: Flashing, gutters and leaders-copper.

INSULATION: Roof-4 in. rockwool over finished third

WINDOWS: Sash-double hung Northern pine wood. Glass-double strength, A, Libbey-Owens-Ford Glass Co.

FLOORS: Living room-random width, Bagac wood. Bedrooms—21/2 in. face, straight sawed, plain red oak. Main halls—Stedman marbleized rubber tile. Service halls—cement. Kitchen—quarry tile. Bathrooms—mosaic ceramic tile.

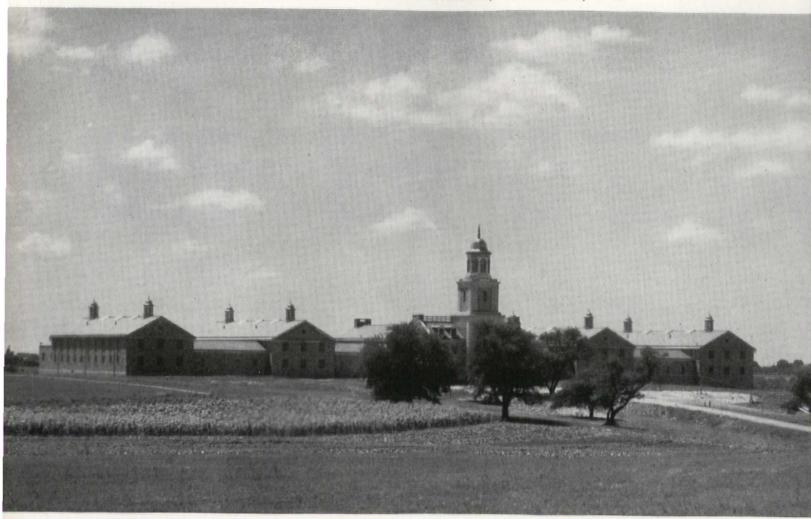
WOODWORK: General interior—birch, painted in main portion and stained in service portion.

PAINTING: Interior—paint, Pittsburgh Plate Glass
Co. Exterior—Old Virginia White with lead and oil, Samuel Cabot, Inc.

ELECTRICAL INSTALLATION: Wiring system— rigid conduit. Switches—Bryant toggle type. Special fixtures by Walter G. Warren.

PLUMBING: All bathroom fixtures by J. B. Clow & Sons. Soil and vent pipes—cast iron or Byer's gal-vanized wrought iron. Supply pipe—copper, Mueller Co. HEATING: Steam with ventilating system. Boiler— Erie high pressure, Petro Nokol oil burners. Wall hung radiators-National Radiator Corp., Marsh valves.

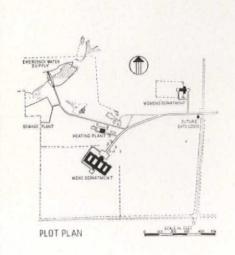
# PENITENTIARY BROAD MEADOWS FARMS, CHESTER, PA.

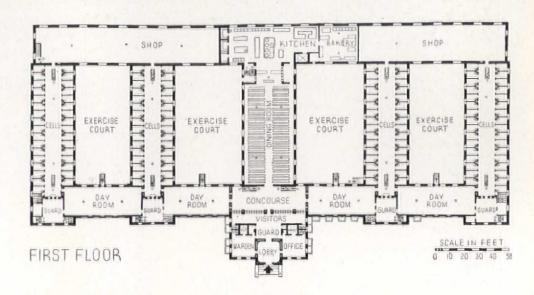


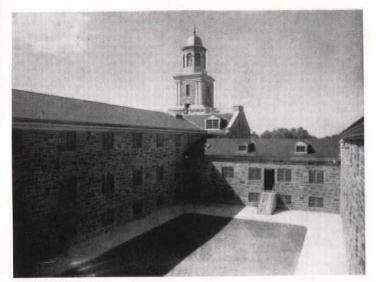
Newell Photos

The prison illustrated here is an example of a growing tendency to mitigate some of the more degrading aspects of prison life. The low building is located in the middle of a large tract of farm land which is worked by the occupants. In addition to promoting a more healthful outdoor life, the arrangement reduces maintenance expenses, and a cannery on the premises takes care of excess produce. The buildings are constructed of local stone, and are provided with the most modern equipment. Recreation and work rooms are ample in size and number. The services, such as laundry, kitchens, bakery, power house, etc., are run by the inmates. The cost of the building, exclusive of architect's fee, was \$1,018,537.

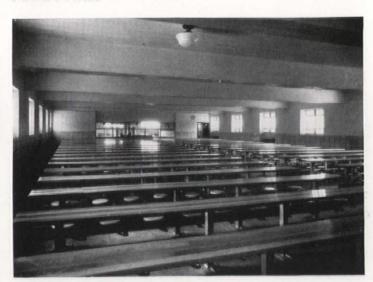
### GEORGE S. IDELL, ARCHITECT







COURTYARD



DINING HALL

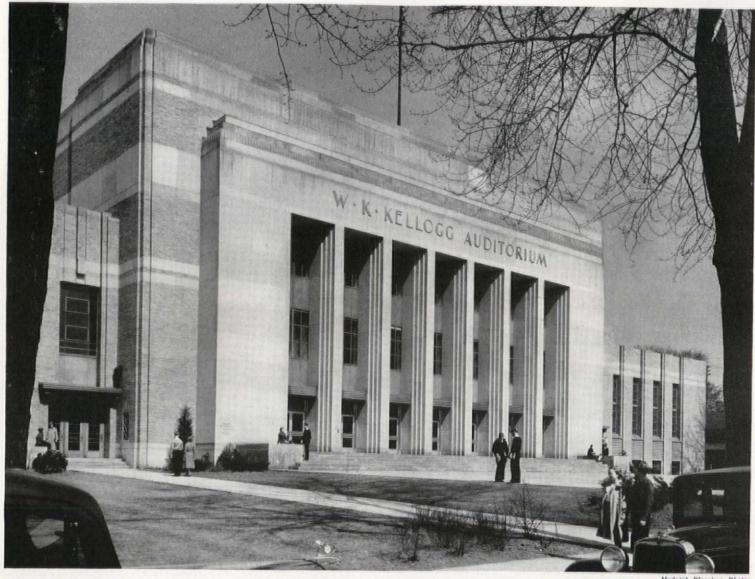


CELL BLOCK



VISITORS' HALL

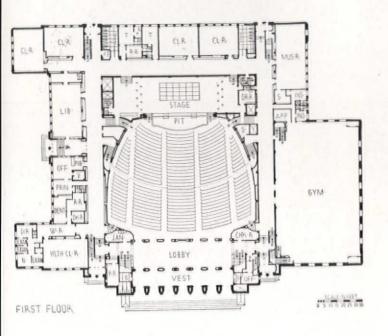
### AUDITORIUM BATTLE CREEK, MICHIGAN

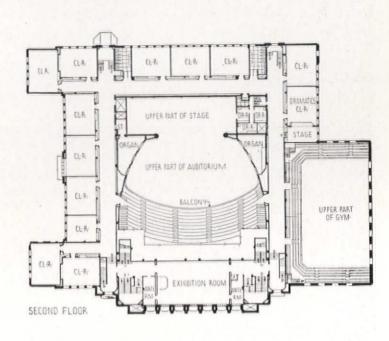


Hedrich-Blessing Photos

The trend toward simplification of surfaces and elimination of elaborate decoration has made headway when it appears in public buildings. Less immediately conditioned by practical and economic requirements than shops and factories, the tendency shown by such buildings as the Kellogg Auditorium is evidence of the growing force of the modern movement. The building is conservative in its treatment, relying for interest on the interplay of flat surfaces and on variation in material. The auditorium interior is very successful, consistent in its decorative treatment and well planned for visibility. The lighting is excellent, and the system of ceiling breaks which conceal the fixtures is also desirable acoustically. In addition to the auditorium, other services include a music room, library, classrooms, and offices.

## ALBERT KAHN, INC., ARCHITECTS









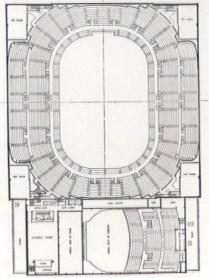
# AUDITORIUM KANSAS CITY, MISSOURI



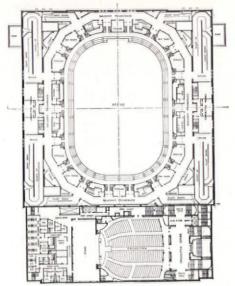
Harkins Commercial Photos

The mammoth auditorium building in Kansas City contains an arena, a large mezzanine for exhibitions, a theater seating 3,000, a small theater seating 1,500, 35 committee rooms, dressing rooms, locker rooms, and the numerous required services. The arena is suitable for conventions and has a maximum seating capacity of 26,000 persons; it can also be used for exhibitions, athletic contests, etc. To facilitate the handling of crowds which might number as many as 45,000 persons, ramps are used for the major vertical circulation. The building cost about \$5,000,000, part of which was provided by the PWA, the remainder being raised by a local bond issue.

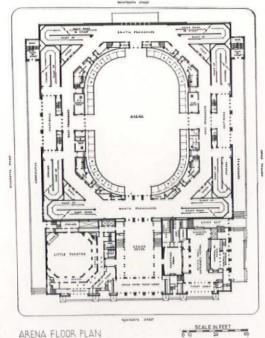
# A. H. GENTRY, VOSKAMP & NEVILLE, ARCHITECTS



UPPER BALCONY FLOOR PLAN



LOWER ARENA BALC & ORCH FLOOR PLAN



ARENA FLOOR PLAN



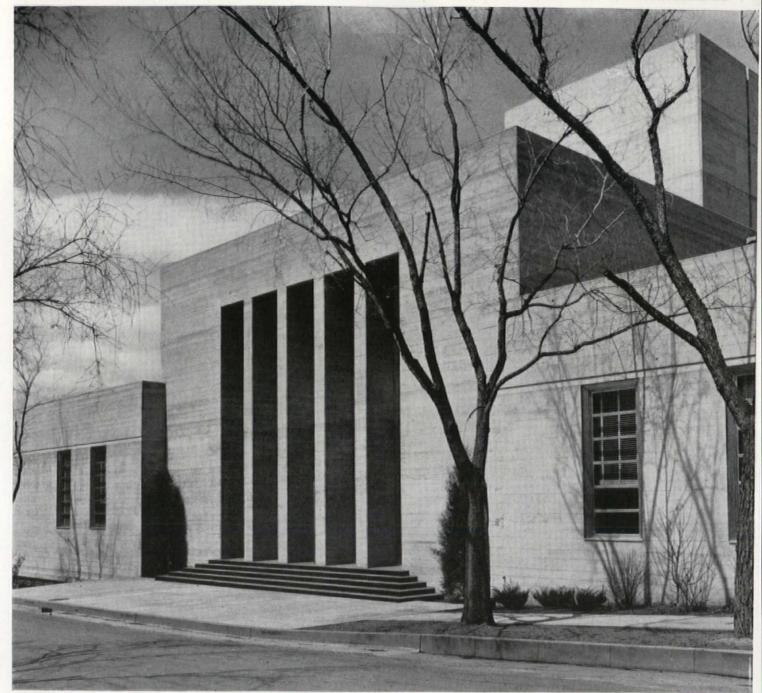


ARENA

MUSIC HALL

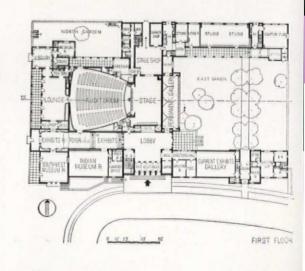


# ART CENTER COLORADO SPRINGS, COL. JOHN GAW MEEM, ARCHITECT



Laura Gilpin

Neither in its exhibits nor in its architectural expression has the Colorado Art Center taken its clue from the past. Here, in Mr. Meem's distinguished building, contemporary art is fostered and displayed. The Center contains exhibition galleries, studios, a theater, and a stage work-shop.



CHURCH

#### CHURCH OF THE BRETHREN, HERSHEY, PENNSYLVANIA

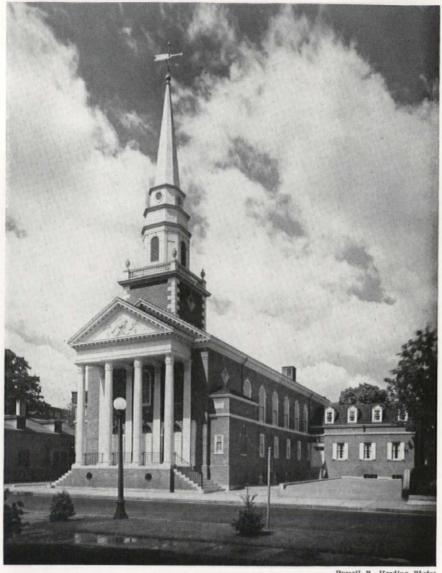


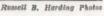
#### WENNER & FINK, CONSULTING ARCHITECTS

Remodeled at small expense with the cooperation of the Hershey Industries, this church is a good example of remodeling practice. The flat portico, the unadorned exterior walls of painted brick, and the clapboard pediment reflect a local tradition of simplicity. As in many meeting houses in this section the auditorium is on the upper floor. The addition indicated in the plan eventually will be built.







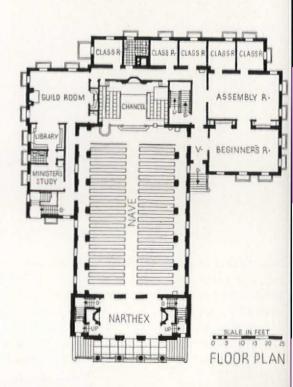






ARLAND A. DIRLAM, ARCHITECT

This Pawtucket Church, facing the newly landscaped area on Park Hill, is a somewhat elegant version of an old New England meeting house. Like most present-day churches, the plan functions as three distinct units; first, the church section; second, the parish wing; and third, the Sunday school. Adaptation of a clerestory type of plan, while not commonly used in the early work, has much to commend it; symmetrical windows provide abundant natural light, and architectural supports can be located to support a wide span without obstructing the view of the chancel. Total cost was slightly over \$100,000.



# recreational





The design and appearance of recreational buildings depend entirely upon the recreational habits of the people that are to use them. Use dictates the general appearances, and, no matter what the variations in decorative treatment may be, they do not alter in principle the fundamental plan of such structures.

Community interest in recreational systems is evident both in the number of projects recently completed, and in the scope of facilities provided. Swimming pools, clubhouses, playgrounds, and group theaters spring up everywhere, showing a definite inclination toward organized and purposeful amusement.

Parks and parkways are now considered as vital addenda to the recreational life of the municipality and are, as such, integrated in the public recreational scheme.

Theaters and other privately owned sources of amusement are catering more and more to the "neighborhood" trade. This phase of architecture is concerned primarily with providing adequate lighting, ventilating, and acoustics, not merely a "striking" front.

TOWARD



#### **CLUB HOUSES**

Since actual use of lounging space in the majority of clubs does not warrant the emphasis formerly allowed in both location and in area, the socially important locker room has supplanted in importance the expansive succession of formal and usually vacant lounge rooms. Locker rooms are being designed to incorporate their own functions with dependent elements consisting of coffee rooms, bars, card rooms, and professional shops.

Since dining service is considered an important source of revenue by the majority of private and municipal club organizations, restaurants are being relocated in order to provide direct accessibility to the dining area from the outside.

#### PARKS AND PARKWAYS

Public responsibility for adequate, accessible, recreational facilities is increasingly recognized; parks are no longer defined as intermittent patches of landscaped area within the city plan. To be worthy of the name park they must provide ample, properly separated facilities for both play and rest. The emphasis is therefore on workable units, designed for use instead of display. As Beaux-Arts formality has disappeared it has been replaced by order, with results infinitely more satisfying to all concerned. Parkways, built principally for access to integrated recreational centers at the periphery of sprawling metropolitan areas, achieved rapid acceptance. The tendency in parkway design is away from the early carriage-drive type toward greater emphasis on free flowing traffic. Original ideas, such as respectably designed gas stations and restaurants, exclusion of commercial traffic, and grade separation at intersections, have been retained and refined. A significant new development is the use of planted center strips to divide traffic.

#### SWIMMING POOLS

The financial and mechanical problems of these structures supersede the purely esthetic conception. Chlorination, filtration, sanitation, safety, and attendance have developed into architectural crystallization of such buildings. Developments in lighting, heating, and air conditioning have made aquatic recreation available in all communities at all times.

With the increasing variety of materials available, all well-built pools avoid slippery and water absorbent surfaces. Circulation is arranged so that the growing demand for spectator galleries may be accommodated by providing two distinct circulatory systems.

Entrances and exits at the deep end have been abandoned, due to the danger ensuing from a congestion of swimmers at this point. Wading pools frequently are handled as elements equipped with foot baths, lockers, steam rooms, and showers.

#### MOVIES

Designers have recognized that the motion-picture theater has its own requirements and no longer copy the legitimate theater in their designs. Trends are currently these: 1) shifting box office toward street away from lobby, 2) smaller lobbies, 3) larger foyers, 4) widening proscenium opening, 5) elimination of balconies, 6) lower ceilings resulting in better acoustical reception, 7) elimination of traditional architectural adornment, 8) air conditioning, 9) improved seating resulting from study of habits and postures of audience, 10) decorative effect achieved with color and light, 11) attractive lobbies conveying an atmosphere of informality, 12) smaller theaters. Marked increase in growth of small neighborhood theaters permits limiting seating capacity to 400 to 1,000 seats. (Seven-eighths of the country's motion-picture theaters have less than 1,000 seats.) Improved lighting systems include: a) cove system, most widely used, b) ceiling coffer, c) multiplane luminaries, d) channel. Maximum efficiency of various systems depends on quality and efficiency of reflectors.

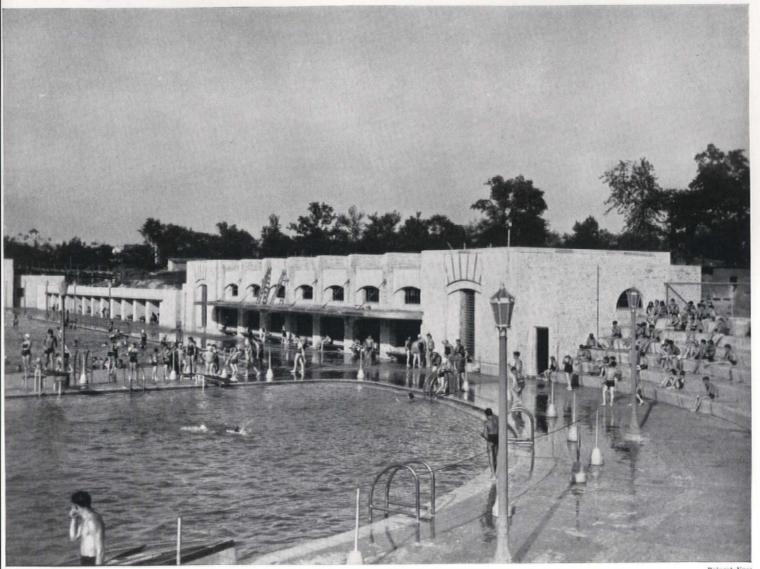
#### **PLAYHOUSES**

Only the largest communities can support a theater used for no other purpose than plays. Recognition of this fact is producing the municipally owned and operated theater building which also provides facilities for food service and meetings. Elasticity is therefore mandatory, and the trend is toward movable stages and platforms, multiple use lighting, ample and varied services, all of which are rapidly becoming established features.

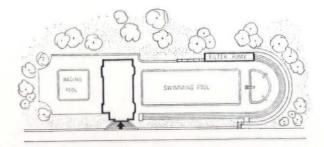
#### ZOOS

Outdoor cages, with moats instead of bars, are increasingly accepted. Indoors, air conditioning and ventilating equipment, to maintain more uniform temperatures, remove foul odors, contribute to the well-being of both spectator and animals. There is a noticeable trend toward the European custom of including restaurants, concert greens, and educational centers in projects of this kind.

# CROTONA PARK, NEW YORK CITY, PARK DEPARTMENT



Beinert-Nuss



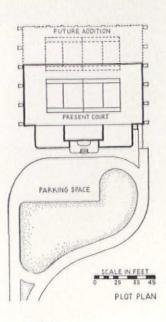
Designers of the Crotona pool avoided the possibility of accidents by segregating swimmers from divers; the former disport themselves in the long pool, 120 x 330 ft., while the divers use the 60 ft. semicircular pool equipped with a diving platform and spring boards. The building shown in the illustration contains boiler equipment for warming the water and filters, water being recirculated after cleaning. Bathing pavilion equipment includes lockers, showers, lavatories and rest rooms to accommodate 2,700 men and 1,700 women. Concrete bleachers overlook the pools.

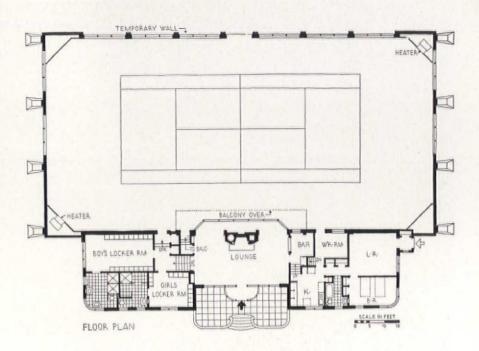
# TENNIS HOUSE GROSSE POINTE FARMS, MICHIGAN



The trajectory type of indoor tennis court, that is, one whose arch follows the natural curve of a tennis ball in play, is one which has been strongly recommended by Mr. Hadden for a number of years, and its efficiency has been proved by the construction of a considerable number of such buildings. The other common type, which has an arch thrown across the courts, has certain disadvantages, chief of which are waste space and lighting by skylights. Here excellent illumination is provided by the huge crescent-shaped windows which extend up to the roof. The building accommodates one tennis court, spectators' balcony, locker rooms, a lounge, and one suite of rooms. The difficult problem of combining the large arched enclosure with the other services has been well solved, and the parts of the building are all in excellent scale with each other.

#### GAVIN HADDEN, CIVIL ENGINEER





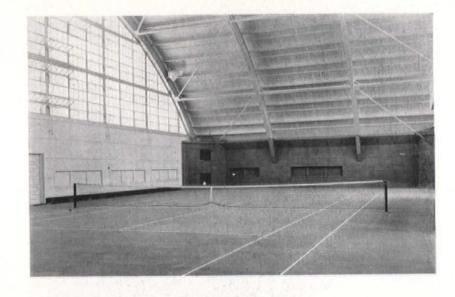
#### CONSTRUCTION OUTLINE

STRUCTURE: Steel skeleton-The R. C. Mahon Co. Exterior walls-brick veneer, limestone

WINDOWS: Factory sash—Detroit Steel Products Co. Sash in lobby—aluminum, Crittal Mfg. Co.

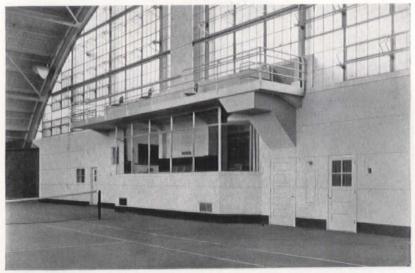
CO.
ROOF: Prepared roofing, The Barrett Co.
SHEET METAL WORK: Copper.
WALL COVERINGS: Tennis hall—Celotex.
PLUMBING FIXTURES: All fixtures by Stand-

ard Sanitary Mfg. Co.
HEATING: Lobby, dressing rooms and apartment—steam. Unit heaters for tennis hall by IIg Electric Ventilating Co.



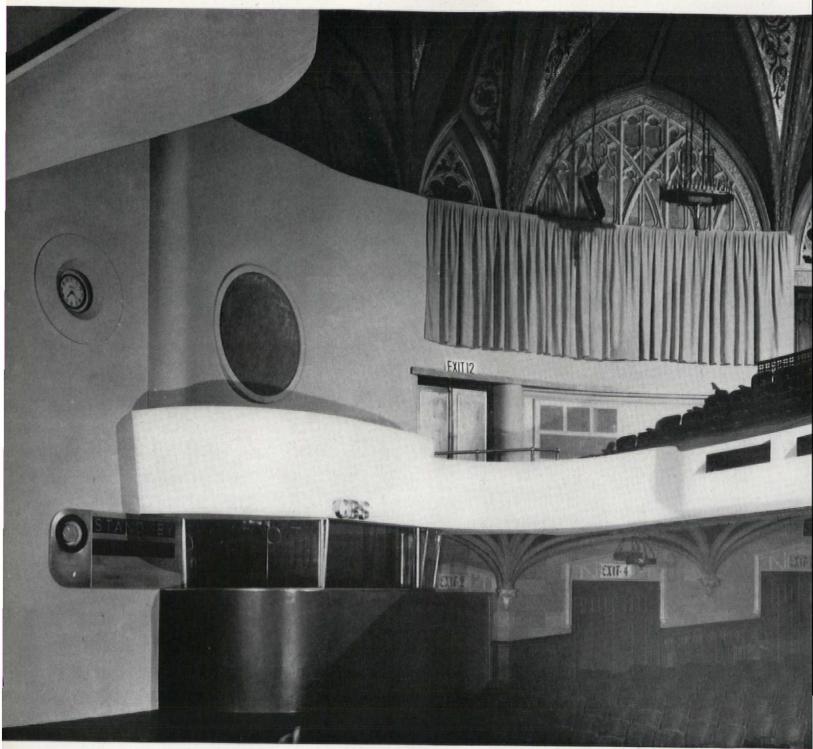


LOUNGE INSIDE



BALCONY

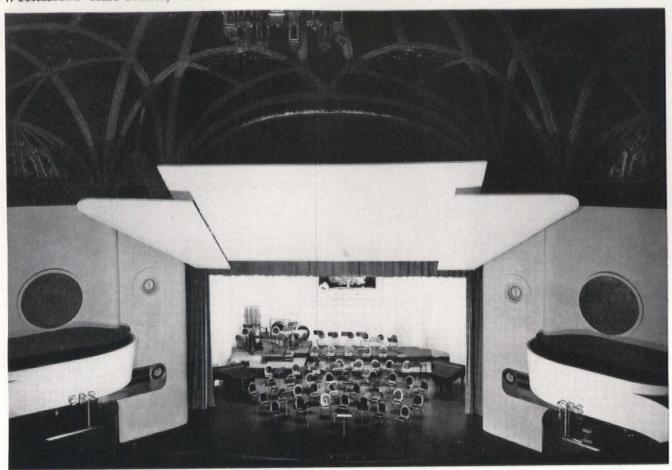
# STUDIO COLUMBIA BROADCASTING SYSTEM, NEW YORK CITY

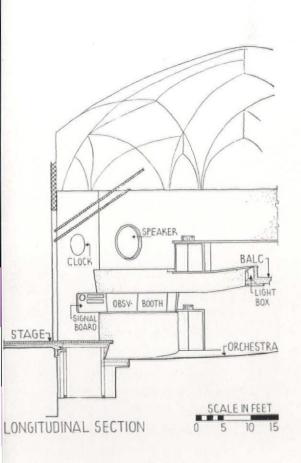


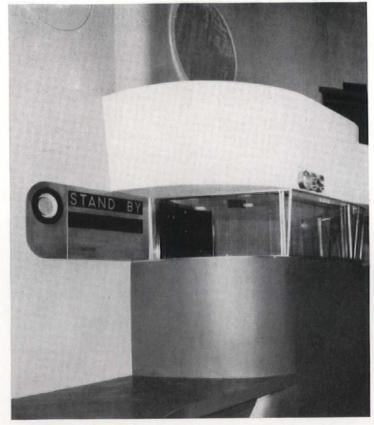
Frank Randt Photo

The Hammerstein Manhattan Opera House may still be identified behind the truly contemporary treatment of this broadcasting studio, purposefully designed to assist the increasingly popular Major in his search for amateur talent. Using the same principles which have made the main studio of the Columbia Broadcasting System such an eminently successful combination of architectural design and engineering, both Mr. Lescaze, the architect, and Dr. E. E. Free, consultant acoustical engineer, have solved the problem confronting them frankly and logically. The somber and dramatic shell, historically memorable in the annals of New York, contrasted with the dynamic expressions of new forms and clean colors invites the attention of the artist and the philosopher alike.

## WILLIAM LESCAZE, ARCHITECT

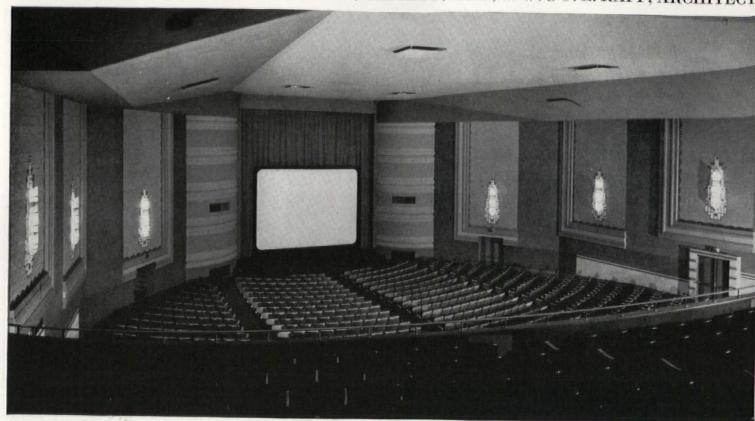






CONTROL BOOTH

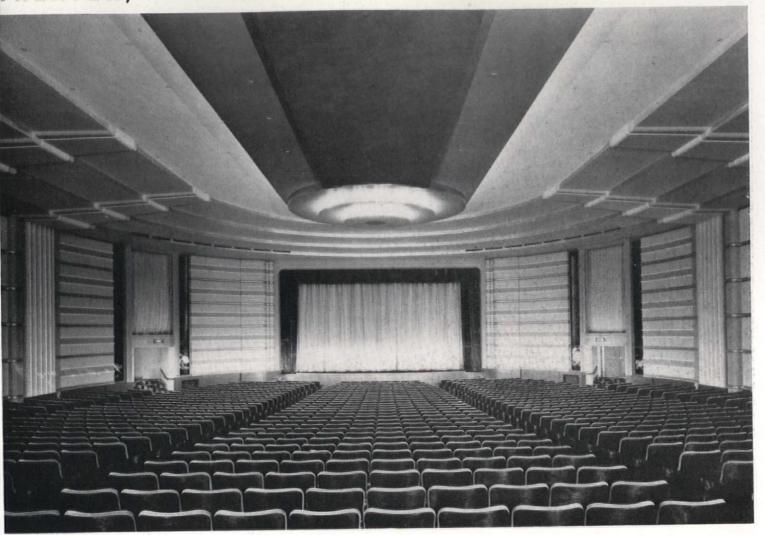
# THEATER WILL ROGERS THEATER, CHICAGO, ILL., C. W. & G. L. RAPP, ARCHITECT

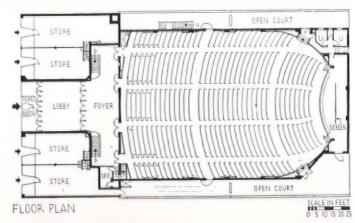


Fred G. Korth Photos

This theater illustrates the trend away from the garish, overly ornate theaters of a few years ago. Facade and interior alike are consistently simple. Confining decoration to a few geometric elements and plane surfaces attention is focused on the screen.









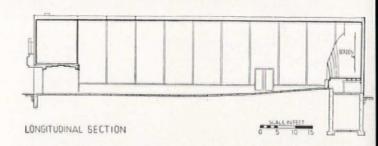
This design incorporates the lighting and ventilating requirements into the interior architectural treatment. The colors and form of the main room lead the eye toward the simple and well-proportioned proscenium; side boxes and false organ pipes have been completely eliminated. The exterior relates the theater to adjacent stores and business buildings.

# THEATER, PIX THEATER, WHITE PLAINS, N. Y.



F. S. Lincoln Photos

BIANCULLI & GHIANI, ARCHITECTS
B. SCHLANGER, CONSULTING ARCHITECT



An admirable example of the small neighborhood theater. The arresting quality of the exterior architectural treatment is obtained through a simple expression of the structural elements, combined with the integration of the lettering in the decorative scheme. The interior is especially commendable for its simplicity, and for the economy of cubage obtained by using the "reversed curve" slope, thereby eliminating the spatially wasteful plenum chamber.



# public





.. TO TAXPAYERS

TOWARD



**PUBLIC WORK** 

The Public Building has often been conceived as a lavishly ornamented monument erected by a government to its taxpayers. The solidity of Justice, Labor, and Agriculture was made apparent and translated into blocks of marble. The actual function of such a building was invariably subjugated to the fine order of a cadenced fenestration. The Dome and the Colonnade became the traditional trade-marks of governmental dignity. Only through slow progression did the architecture grow from the botanical bulb toward an architecture which gives a true picture of civic power and an efficient solution of space arrangement.

It is naturally fitting that historical precedent be respected and admired; however, there is marked skepticism concerning the advisability of superficial copy and adaptation as a real expression of respect. Public buildings have definitely identified themselves, during recent years, with public works whose whole purpose is not to flatter, but to serve, the commonwealth. Law courts, post offices, and administrative buildings are following the trends of our times in an effort to create an architecture primarily designed to serve a purpose derived from use.

#### PUBLIC UTILITIES

In building this type of structure the aim has been to organize the functional appearances of the architecture with the contiguous property. This conception has incorporated the water works and power plant into the park system of the community. Such functional elements as storage and supply plants can, when designed honestly as pure forms, become important decorative features. Large expanses of blank walls make ideal backgrounds for landscaped developments.

#### POST OFFICES

This type of public building demands the complete segregation of public elements from the official ones. A certain dignified and decorative quality is desirable in the lobbies, exterior elevations, main rooms and other units used exclusively by the public. However, in the working areas the plan represents the most straightforward means of handling and safeguarding the mail expeditiously. Rural post offices usually follow local styles in order to harmonize with surrounding business buildings. In larger centers a modified classic is used, replacing the former classical prototype.

#### LAW COURTS

A solution of the acoustical problems is of primary importance in the design of law chambers. It is imperative that judges, jury, and audience hear and be heard without disturbances caused by echoes and reverberation. Due to this fact, court rooms are basically similar to auditoriums, and any decorative treatment is dictated and simplified by the demands of acoustical engineers.

#### POLICE STATIONS

Changes in the procedure of police work have influenced and altered the planning and designing of police stations. The location of radio equipment is now considered of primary importance, while the identification bureau and record room have grown into comparatively secondary elements of the special functions requiring special lighting and mechanical equipment. The cell groups are thoroughly ventilated and usually designed to form a complete and independent element. Invariably, police stations include a pistol practice range located in the basement.

#### PENAL INSTITUTIONS

The prison as a purely disciplinarian institution is being replaced by the reformatory whose function is not only to punish, but to educate the mentally and socially deficient inmates. In order to achieve this end, many existing penal institutions have had to expand and remodel. Classrooms, laboratories, shops, and recreational quarters are complementary elements of the once all-important celled box.

# CITY HALL HAMILTON, OHIO





0 SCALE PLEET FIRST FLOOR PLAN

F. G. MUELLER, GEORGE BARUMAN, R. E. SMITH, ASSOCIATED ARCHITECTS

An effective mass is achieved in this municipal building by large unadorned wall surfaces contrasted with restricted areas of flat sculpture. Housed under one roof are the administrative, police, and fire departments. This grouping of several municipal departments in one building represents a definite trend in smaller cities. The resulting simplification effects substantial economies.

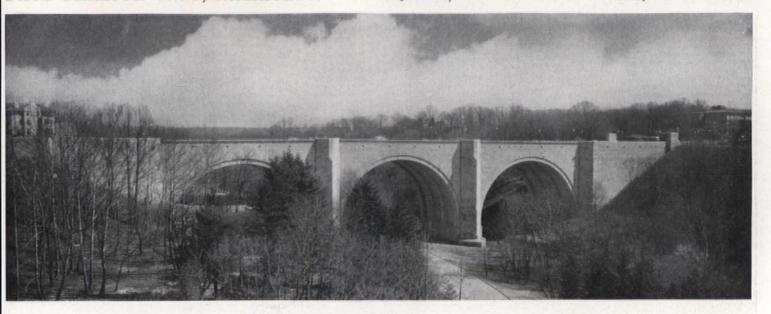
# BRIDGE CALVERT STREET BRIDGE, WASHINGTON, D. C.

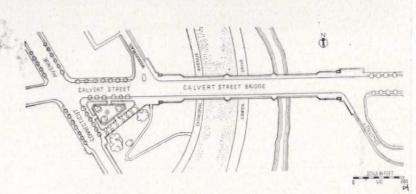


William M. Rittase Photos

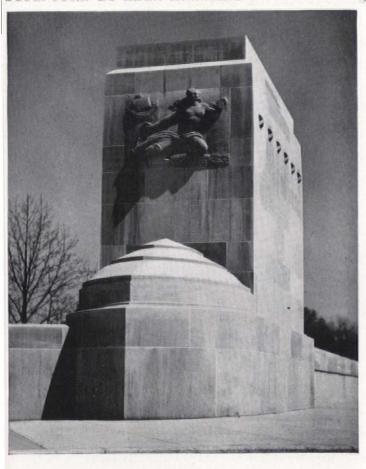
With steel spans the rule today, this new concrete bridge appears as an interesting exception. Of it Mr. Cret writes, "Solutions to architectural and engineeering problems are always many. So long as there is an opportunity for choosing, the personal element of our more or less developed taste becomes the predominant factor, and we enter the domain of art . . . Spanning Rock Creek Valley, the bridge had to accommodate roadways at various levels, and a single span could have met these conditions. For various reasons, the three-arch scheme was adopted, with the recommendation that the bridge be faced with stone, instead of leaving the concrete structure apparent. If such a treatment needs justification, it may easily be found in the unsatisfactory weathering of any concrete structure after ten or fifteen years . . . It will be obvious that, in the Calvert Street Bridge, architectural repertory has been sparingly used. There are, in this whole work, only two profiles which required a full size detail."

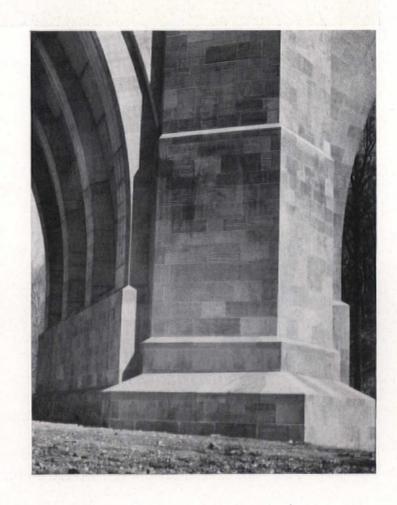
## PAUL PHILIPPE CRET, ARCHITECT. MODJESKI, MASTERS AND CASE, ENGINEERS





SCULPTURE BY LEON HERMANT





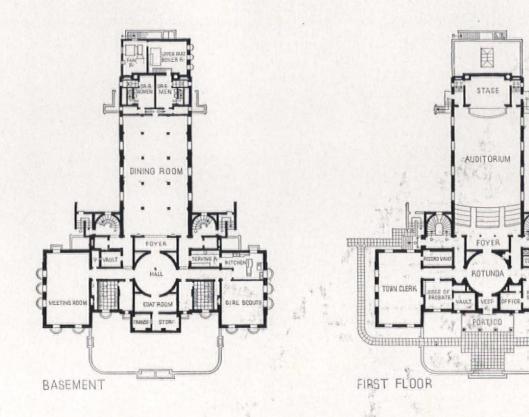
# TOWN HALL, ENO MEMORIAL HALL, SIMSBURY, CONNECTICUT

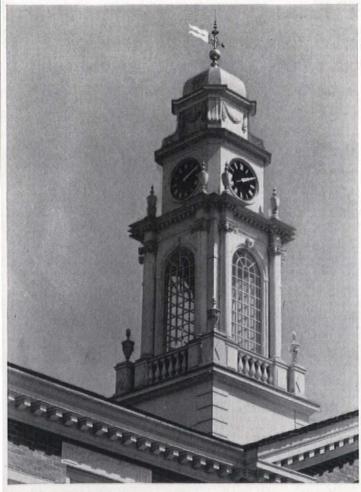


Gottscho Photos

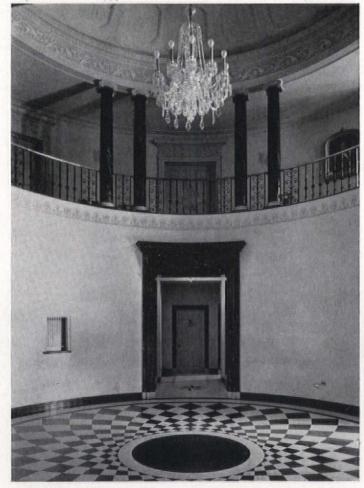
One of the most delightful features of a New England town is usually the meeting house and town hall. Frequently dating back to early Colonial days, these structures serve effectively as community centers. Therefore it is appropriate that a memorial building in Simsbury should, both in tradition and use, take the form of a town hall. Housed under one roof are the combined facilities of meeting rooms, civic administrative offices, and a historical society museum.

## SMITH & BASSETTE, ARCHITECTS



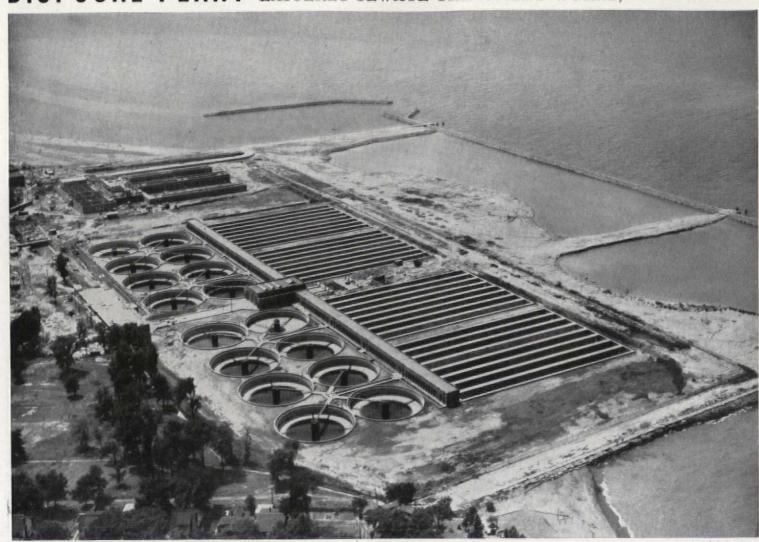


TOWER DETAIL



ROTUNDA

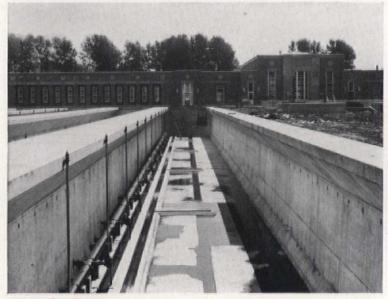
# DISPOSAL PLANT EASTERLY SEWAGE TREATMENT WORKS,



Aerial Surveys, Inc

Sewage disposal plants are assuming increased importance with the growth of public understanding of the high cost of water pollution. One of the newest plants is this addition to Cleveland's facilities, which, on its completion, will be able to take care of an eventual population of 1,000,000. It is being financed by a PWA allotment of \$8,990,000. The photograph above shows the large circular settling tanks and aeration tanks. Sludge from the settling tanks is pumped thirteen miles to another plant, where it is further treated.

#### DEPARTMENT OF PUBLIC UTILITIES, CLEVELAND, OHIO



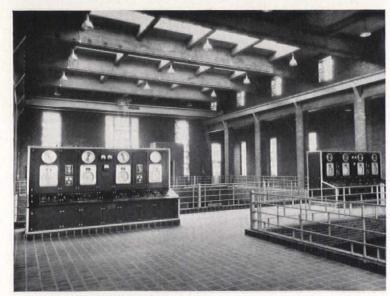
**AERATION TANKS** 



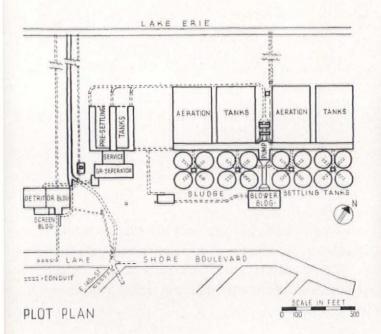
Sewage reaches the plant site through the Easterly interceptor and the Collinswood trunk system, which comprises three separate sewers. These sewers have a combined capacity of 1,055 million gallons per day but storm flows in excess of 390 million gallons per day will be bypassed into the lake. Coarse screens, detritors and grit chambers treat a large part of the sewage; grease catchers and pre-settling tanks the remainder.

The effluent from the detritors enters an air-agitated oil and grease flotation unit, from which it passes to eight rectangular pre-settling tanks. From here the partly clarified sewage is conducted to a group of 32 aeration basins for a five-hour aeration period before entering the final battery of sixteen sludge-settling tanks. Between the aeration and final settling tanks is an operating gallery 1,000 ft. in length and 19 ft. wide which houses meters, valves, air conduits, sludge-return pumps, and distribution piping for the control of both units. Other prominent structures on the site include the administration, service and blower buildings. The outfall sewer is a twin conduit of concrete pipe supported on wood-pile bents and extending 700 ft. into the lake for discharge Just beyond the new rock breakwater.

Provision is made to apply chlorine at three points, for odor control if necessary, and to the final effluent for disinfection during the bathing season.



SLUDGE PUMP BUILDING





SLUDGE SETTLING TANKS

# POST OFFICES



CHATTANOOGA, TENN.

R. H. HUNT CO., ARCHITECTS

SHREVE, LAMB & HARMON, ASSOCIATES



STORM LAKE, IOWA



WINDER, GEORGIA

SUPERVISING ARCHITECT, PROCUREMENT DIVISION TREASURY DEPARTMENT

Requirements of use have led to fairly rigid standardization in the layouts of post offices, while imposing no such uniformity on the exterior design. Post offices in large cities are generally in the monumental manner while those in small towns show greater variety and frequently reflect local traditions. These three buildings illustrate the increasing and commendable Government preference for simplified exteriors.

# **SUBDIVISIONS AND THEIR HOUSES**

The better to examine its own particular Skyline of 1936, BUILDING MONEY this month forsakes its traditional form to devote itself to the consideration of a single subject: The Subdivision.

# **SUBDIVIDING THE U. S., 1935-1936**

has engaged the activities of some 20,000 builders. A survey of small houses, merchandising methods, architectural trends, people and the future.

During the last twelve months residential building in the U.S. showed an increase over the preceding year of roughly 90 per cent, and it led all other categories of building by a wide margin. And, as usual, nine-tenths of this residential volume represented houses that were erected on subdivisions for sale on speculation. Of the 50,000-odd subdivisions in the U.S., the Federal Housing Administration estimates that somewhere between 15,000 and 20,000 were active during the year, each one building anywhere from one to 500 houses. The greatest subdivision activity centered in Long Island and New Jersey, in the golden backwash of New York City's too abundant population. Los Angeles was second, with Detroit an easy third.

So strong a revival could not help but bring out with especial clarity the dominant trends in current subdividing practice, and of these easily the most significant was the firm establishment of the 20-year amortized mortgage insured by the FHA. During the year, 4,500 of the 12,500 subdivisions applying for FHA insurance received it. The net effect was to establish a minimum construction standard which served at least to discourage the worst kind of building, to improve by the use of amortization the character of part of the country's new mortgage debt, and, by the popularization of the 20 per cent equity, to place home ownership within the means of the people.

Small Home. A recent analysis by the FHA reveals that 25 per cent of all mortgages accepted by it for insurance since January 1, 1936, were for houses costing less than \$4,000 with lot. The figure is a reflection of the canniest decision of the year by U.S. subdividers, who recognized in large numbers that the biggest pot of money lay in the low-cost house. This decision was arrived at independently by two groups in the market, and by totally different methods. On the one hand the oldhand subdivider had simply sniffed the fine Spring air last March, and remarked that this was probably going to be a good year for houses selling between \$3,990 and \$4,990. The result of this cogitation was a huge number of brick veneer and half-timbered houses of six rooms and pink baths, all stacked up in rows. Their only recommendation was that they were often better than the \$6,500 house of 1929.

On the other hand there were also some

thinking men in the market who decided to build low-cost houses for statistical reasons. These reasons broadly added up to the fact that an untapped and tremendously large market lay below \$5,000, and that one way to make money was to build a good house under this price level. The Committee for Economic Recovery made an official announcement to this effect, and the FHA sent out a great deal of publicity to the same effect. The results were on the whole not bad. The Government itself, through its Resettlement Administration, worked out a very acceptable solution in several subdivisions, where it offered subsistence homesteads on 40-year mortgages for \$3,261.50. Then, in its publicity, the FHA released plans for what were termed "minimum specification" houses, to sell, without land, for from \$1,200 to \$2,500. Several attempts were made to get these plans in work, and the attempt that came nearest to the original was that of the National Lumber Manufacturers Association, which erected three outside of Washington, D. C., on einder block foundation, found their prices higher than those of the FHA.

Standards. The standards of subdividing generally did not improve very much. Of the 12,500 subdividers who approached the FHA for approval over the last year, better than 60 per cent offered layouts which exhibited only a rudimentary knowledge of planning, and only about 15 per cent showed any real appreciation of the true requirements. But let those who would carp too long remember that 15 per cent of the 12,000 subdivisions is still 1,800, a not inconsiderable number of well laid-out properties for any country.

The houses, after their honeymoon with "period" architecture during the '20's, showed a sharp return to Colonial and English forms. Because this style is much

(Continued on page 400)

On the following nine pages are presented some details about nine subdivisions. They are not necessarily the most handsome subdivisions, nor the best money makers. They are simply the most commendable examples of subdividing that have come to the attention of The Forum during 1936. Perquisites for inclusion have been sound planning and good architecture, always considering the limitations of subdividing. Not considered have been rapidity or volume of sales, for the reason that sales have as yet achieved no correlation to quality, and the fastest selling houses frequently give the consumer least.

In gathering information relative to the 1936 Subdivision, The Forum sent to some 300 builders throughout the U.S. a questionnaire with these interesting results:

1. In the price class ranging from \$7,000 up, subdividers reported almost without exception a sharp reversion from the period architecture of the Twenties to the Colonial. A reflection of this fact, and a measure of the lack of imagination with which it has been grasped may be gleaned by comparing the nine highly reminiscent facades presented here.

2. In the same price class, more than 80 per cent of the subdividers use the single, amortized mortgage. However, about 20 per cent of these felt that a proper equity was greater than the 20 per cent prescribed by FHA.

3. About 10 per cent of the houses costing more than \$7,500 were designed without benefit of architect. Of the 90 per cent that received architectural supervision, about 10 per cent received it from so-called "company" architects who are retained as full-time members of the builder's staff.

 Subdividers have built about 110 per cent more during 1936 than they did during 1935.

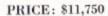
Critical comment on the 1936 Subdivision must first admit that the calibre of the architecture has improved considerably through simplification; and must then point out that in the mass it has a long way to go before it takes full advantage of the virtues of contemporary work. Planning has become a full-time word in the subdivider's vocabulary, and this fact has been reflected to a certain degree in his work. But at least 75 per cent of it is still incredibly bad. For a display of the low-cost house in Subdividing, see p. 396.

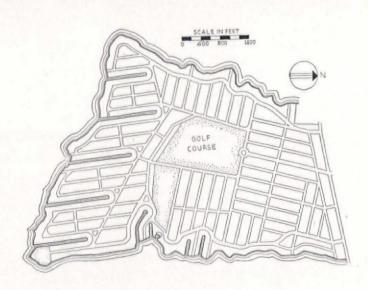
# NASSAU SHORES, NASSAU CO., L. I., HARMON NATIONAL REAL ESTATE CORP.



Gustav Anderson







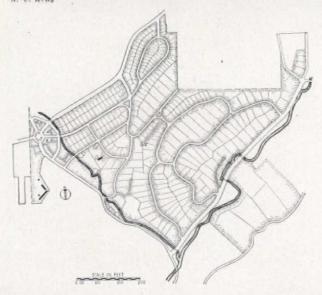
In 1887 it was William Elmer Harmon who fathered the real estate installment plan, in Cincinnati. Later it was he and his brother who had branched out into 244 projects in 32 cities, one of which was the founding of thriving Harmon, N. Y., on the Hudson River. In the early 1930's it was W. Burke Harmon, son of William Elmer, who took half a thousand acres of Long Island swampland, canaled, drained, landscaped, and subdivided them at a cost of \$3,000 per acre, to sell for \$10,000. In 1936 this same son was sponsoring one of the most astute methods of merchandising the business had yet seen (see page 402). The Harmon National Real Estate Corp. favors the simple Colonial lines that come from the board of Architect Randolph Evans, let him do most of their work.

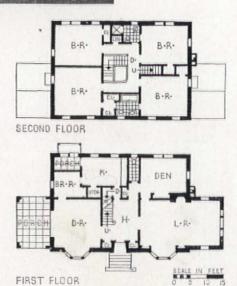
Architects supervise all homes. Volume has been 67 homes in the last 12 months, 42 the year before. Fastest selling house costs \$8,000, has 6 rooms, bath, lavatory.

## MOUNTAIN BROOK, BIRMINGHAM, ALA., THE JEMISON COMPANIES



A. C. Kelly





PRICE: \$14,500

To the southeast of Birmingham, Ala., lies a heavily wooded, hilly reach of country which its owner, Robert Jemison, Jr., has divided into four developments, Mountain Terrace, Altamont, Redmont Park and Mountain Brook. Subdivider Jemison (who is also State Director of FHA), capitalized on the nature of his terrain, laid out a collection of bridle paths, then put out a series of brochures stressing not only the circles and cul-de-sacs which are required of any good subdivision plan, but more especially the facilities for horseback riding. His speculative designs were further enhanced by a park, three country clubs, schools, and the proximity to Birmingham. He has found that his clients prefer houses of brick veneer painted white, with green blinds, like the one above. Various Birmingham architects supervise all Jemison homes, are not employed by the company. Volume of Subdivider Jemison's most recently active subdivision, Redmont Park, has amounted to sixteen homes in the past twelve months, two in the previous twelve. Price range is \$10,500 to \$18,000. Purchasers want six to eight rooms, two baths and extra lavatory.

## SHAKER HEIGHTS, CLEVELAND, OHIO, VAN SWERINGEN COMPANY

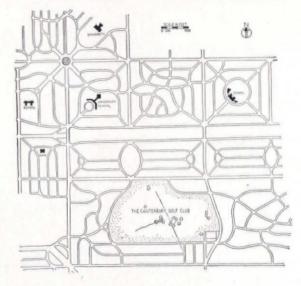


Ernest Graham









PRICE: \$27,500

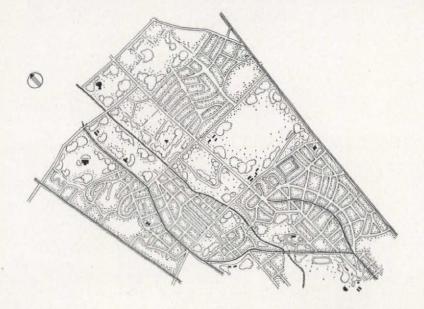
CLEVELAND'S Shaker Heights is one of the half-dozen best and best-known of the world's restricted districts. As a subdivision, it was launched by the Van Sweringen brothers, who proceeded from the transportation problems of their first development to the purchase of the Nickel Plate Railroad, and thence to their railroad empire. The Van Sweringen Co., having improved the district, sells groups of lots to such a company as Keyes-Truehaft, which built the home above. This concern proceeds as does any subdivider, save that it buys its land only in choice single lots, thereby stands a better chance in the speculative market. Style in Shaker Heights has evinced a decided trend from 75 per cent half-timbered English in 1929-1932 to 75 per cent Colonial and Georgian in 1935-1936.

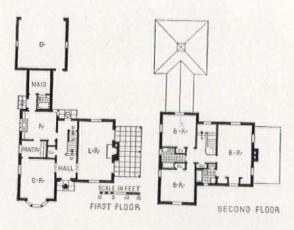
Architectural supervision is mandatory. Volume may be judged by the fact that, from January 1 to August 15, 1936, plans for 190 homes on Van Sweringen land were approved. Price range of these homes is \$8,000 to \$40,000 exclusive of land. The Van Sweringen Co. reports that the \$25,000 home sells as readily as the \$10,000. Perhaps 50 per cent are speculative.

## ROLAND PARK, BALTIMORE, MD., ROLAND PARK CO.



Blakeslee-Lane





PRICE: \$11,300 (without land)

Baltimore is the home of good subdividing. Ground was broken nearly half-a-century ago for Roland Park, Homeland, and Guilford, fine properties which have made money ever since. In style, the company is beginning to notice a trend toward the modern, but Colonial is still leader. The pioneer restrictions have teeth just sharp enough, and the road platting can still serve as a model. The property holds most of the best Baltimore schools, including Gilman, Calvert, Friends', Loyola, Notre Dame, St. Mary's, Girls' Latin, Roland Park, Johns Hopkins University.

Architects are required. Roland Park Co. has retired from active building, but sponsored and aided in the financing of nearly 100 homes in the last twelve months, more than 50 the year before. Price range of Homeland, whence this home, is \$10,000 to \$25,000. Fastest selling price here is \$14,000, which buys six rooms, two baths, a lot perhaps 100 x 175 ft.

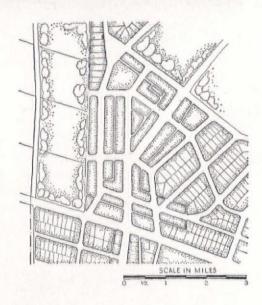
## WESTWOOD HILLS, LOS ANGELES, CALIF., JANSS INVESTMENT CORP.







PRICE: \$26,000

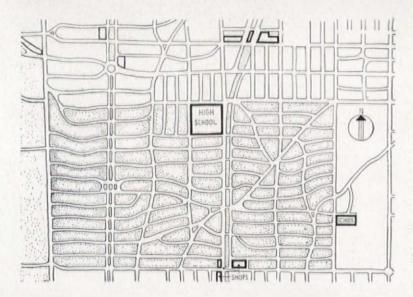


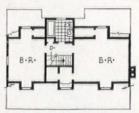
Curving around the campus of the new and lusty University of California at Los Angeles in the Sierra Nevada foothills lies Westwood Hills, latest and best of the subdivisions to be sired by the Janss Investment Corp. The University stands on Janss land, and around that nucleus have grown, in 50- and 60-acre tracts over the 3,300-acre property, belts of residential districts tiered by income. The further out they develop the more the Janss brothers, Edwin and Harold, display a tendency to straightaway gridiron planning. But they have also demonstrated, in circles, courts, and cul-de-sacs, that they know much better. The irregular but not confusing plan of the home shown above is indigenous to its western background. Designed by Architect Allen G. Siple, its ten rooms, two baths and four porches fetched a tidy \$26,000.

Architects are not employed by the Brothers Janss; but 80 per cent of the homes in Westwood Hills are architect-designed. From August 15, 1934, to August 15, 1936, in Westwood Hills, 628 residential building permits were issued, the bulk in recent months. Price range is \$4,500 to \$32,500. Fastest selling house is priced at an average of \$12,500, has nine rooms, including three bedrooms.

## COUNTRY CLUB DISTRICT, KANSAS CITY, MO. J. C. NICHOLS INVESTMENT CO.







SECOND FLOOR



PRICE: \$8,750

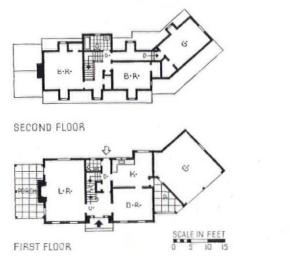
On 4,000 acres three miles from Kansas City live more than 25,000 people. They populate the Country Club District, largest unendowed U.S. subdivision, which has never had to foreclose a mortgage. The District is the product of Jesse Clyde Nichols, who once, in a fine Biblical mood, asked himself: "What bird in the air, fish in the sea, or savage beast in the forest handicaps itself by rectangular movement?" then laid out his roads with consideration only for such factors as two rivulets, natural contours, old trees. See here only a fraction of Nichols land. His architects have planned his small homes compactly. Note, in the one above, how the porch fits into the cube, providing privacy as well as simplicity.

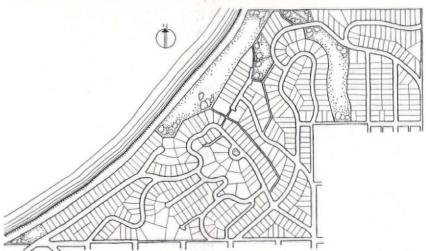
Architects are essential. Volume equaled 65 in the last twelve months, 50 in the twelve months previous. Price range is \$7,500 to \$47,500, although on contract the price has been raised as high as \$140,000. Fastest selling house is priced between \$8,500 and \$9,500, includes three to four bedrooms, two baths, forced air heating plant, garage.

## BLUE RIDGE, SEATTLE, WASHINGTON, W. E. BOEING



Frank Jacobs





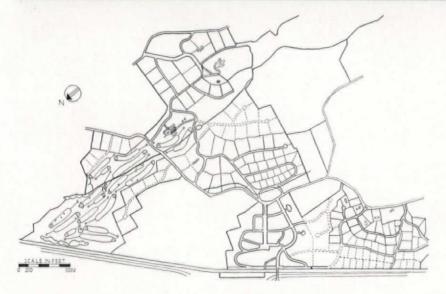
PRICE: \$8,350

Seattle's Real Property Inventory in 1934 showed that 70 per cent of its houses were over ten years old, and that well over 80 per cent of its homes had cost less than \$5,000. To Realtor Hugh Russell it, therefore, followed with unavoidable logic that in Seattle there would soon be a market for \$5,000 homes. With Aircraftsman William Edward Boeing, who owned a large, improved plat of land on the ocean slope of the Olympic Mountains, Realtor Russell set to work a year ago, building a Cape Cod model house which took but two weeks to draw 8,500 people, sell itself and two others. Content at first to offer houses with little profit margin in order to earn his Blue Ridge development character with the market, Mr. Russell has pushed prices up since the beginning of 1936.

Architects W. E. McKinney and George Wellington Stoddard have divided work thus far. Volume is 23 houses in twelve months. Price range has been held between \$5,800 and \$8,350. Fastest selling house is priced at \$6,800, has six rooms and bath, with the lavatory and the full garage which experience has shown desirable. A two-car garage is attached.

## LAWRENCE FARMS, WESTCHESTER CO., N. Y., LAWRENCE PROPERTIES, INC.







The Lawrence family is a power in New York's wealthy Westchester County. The story of how they built Bronxville, a village of 6,000 people, has been often told. Bronxville's swank Sarah Lawrence College was founded by and named for one of the family. But their business has never been based on quick profits. Thus, when Lawrence Farms, 40 miles from Manhattan, moved slowly after its 1928 start, it was nothing new in Lawrence performance records. Its 800 acres were bought for \$1,500 an acre, cost \$1,000 an acre to improve, sell for \$4,000. On the lots, in general, are rambling farmhouses.

Volume has picked up with Recovery. Twenty-six houses were built in the last year, about half for owners. Fifteen were built in the year previous. Price range is \$11,000 to \$48,000, the minimum permitted being \$10,000. Popular price has proved to be \$20,000, that much buying three master bedrooms, two master baths, servant's bedroom and bath, kitchen, pantry, living room, dining room, library with lavatory.

### FRANKLIN VILLAGE, DETROIT, MICH., GEORGE WELLINGTON SMITH







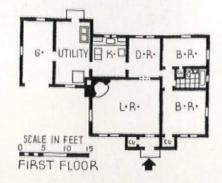
PRICE: \$11,500

George Wellington Smith, developer of Franklin Village, a suburb of Detroit, stopped building in 1931. Since then he has contented himself with watching others build to order on his restricted land. As has become habitual with moneyed suburbs, style runs to early Colonial, so that this rambling adaptation of the early American farmhouse above is typical of the development. A prospective builder in the Franklin Village district must submit his plans for approval to a committee of four residents and three qualified architects. Developer Smith placed his land hard by a main highway, then discouraged speedsters by the uniform use of right-angled side roads. The shopping center, necessary since Detroit is half an hour away, is centralized in the Village, with Franklin Estates, Franklin Villas, Franklin Hills, Willow Green Hills, and the other arbitrary divisions of "The Town that Time Forgot" chained in a circle around it. Architects supervise plans of all homes, but are not retained on the company payroll. Volume, since Developer Smith stopped building, has slackened somewhat. Nine homes were built on his land last year, one the year before. Price range in Franklin Village is \$7,500 to \$15,000.

### LOW COST HOUSES



\$3,950



Architect Martin H. Braun designed this and 100 more houses for the Fred J. Walsh Company's subdivision outside of Chicago. This one has seven rooms and a garage, and rests on monolithic concrete foundations. It has been insured by the FHA. Together with three-fourths of an acre of arable land, it sells for \$3,950.



Louisville Courier-Journa \$2,650



Foster Gunnison, onetime promoter of Motohomes, developed this four-room house, dubbed it MagicHome, and erected six variations of it outside of Louisville in ten working days this summer. Prefabricated in four-foot panels of plywood—with which ceilings, walls and floors are faced—it rests on concrete foundations, but has no cellar. Price, with small lot: \$2,650.



\$3,261.50



This five-room house stands outside of Wichita Falls, Tex., and is one of 62 homes built there by the Subsistence Homestead Division of the Resettlement Administration. It has no cellar. With a small plot of land, it sells on a 40-year payment plan at 3 per cent interest for \$3,261.50.



\$2,870



This house represents one of several attempts to build houses according to the minimum specifications released this summer by FHA, which estimated this model to cost \$2,500 with basement, but without land. The Na-tional Lumber Manufacturers Association built it of wood outside of Washington, D. C., without land, but with a contractor's profit, for \$2,870.



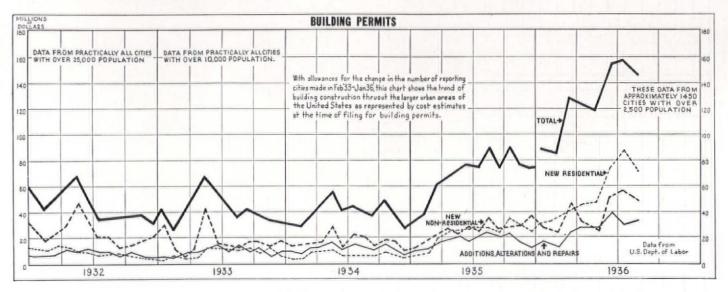


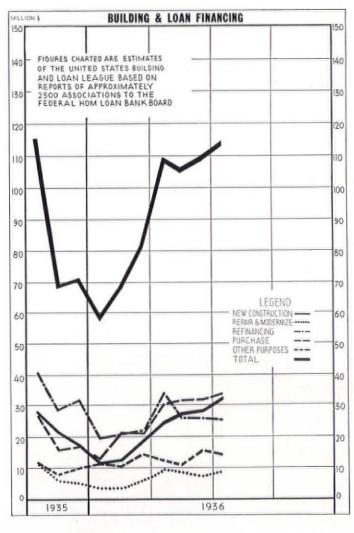
Long Island building costs are low, and this summer cottage has no basement. But its price includes the services of Architect Randolph Evans, designer of much of the best work on Subdivider W. Burke Harmon's land. With a small plot of land, it sells for \$2,550.

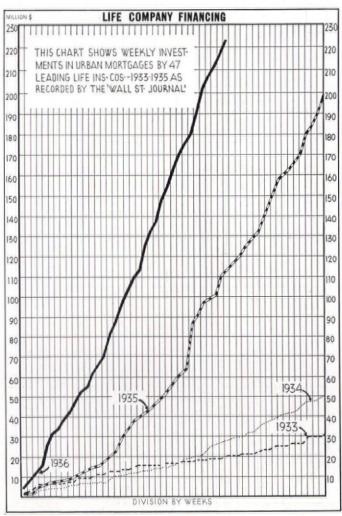
\$2,550

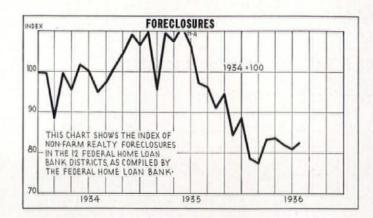
### THE BOOM IN THE MAKING:

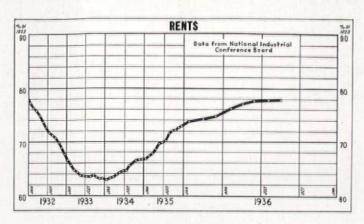
material costs reach a steady keel, foreclosures fall while rents rise, mortgage financing zooms. Permits, paced by the home, reach a five-year high.

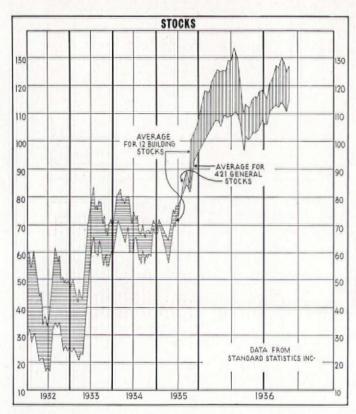


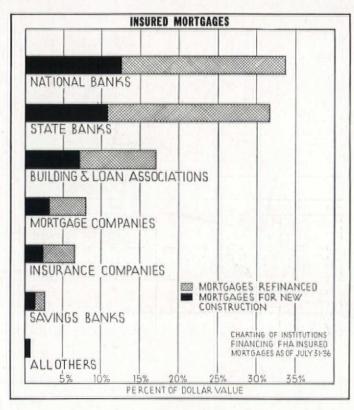


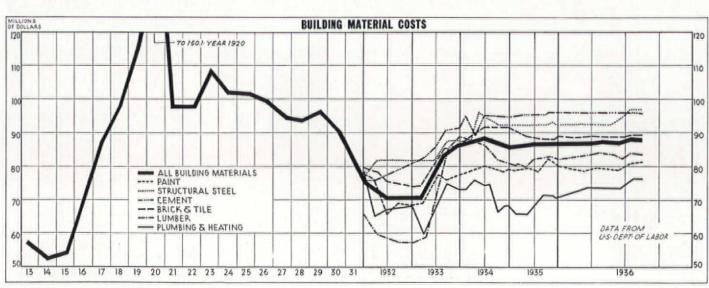


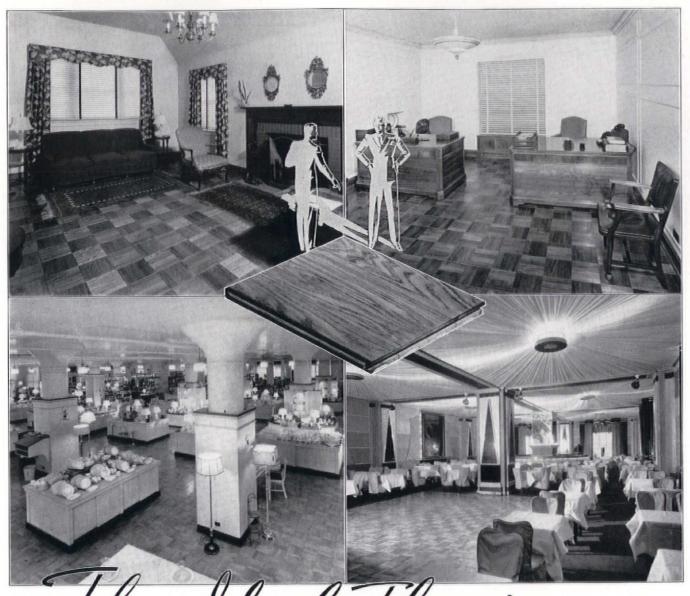












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Sidney Zehman L. L. Broida, Architect



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(Continued from page 386)

better suited to the small house, to the typical U.S. community, and to the typical U.S. landscape, the results were generally happy. The vast majority of subdividers building below \$5,000 continued to believe that taste descends in proportion to price, and to foist on the public as many halftimbered atrocities as ever. Not to be denied was the fact that their reasoning was too often correct: in the \$3,000 to \$5,000 class the simple house was invariably outsold by the more ornate, half-timbered, colored stucco job.

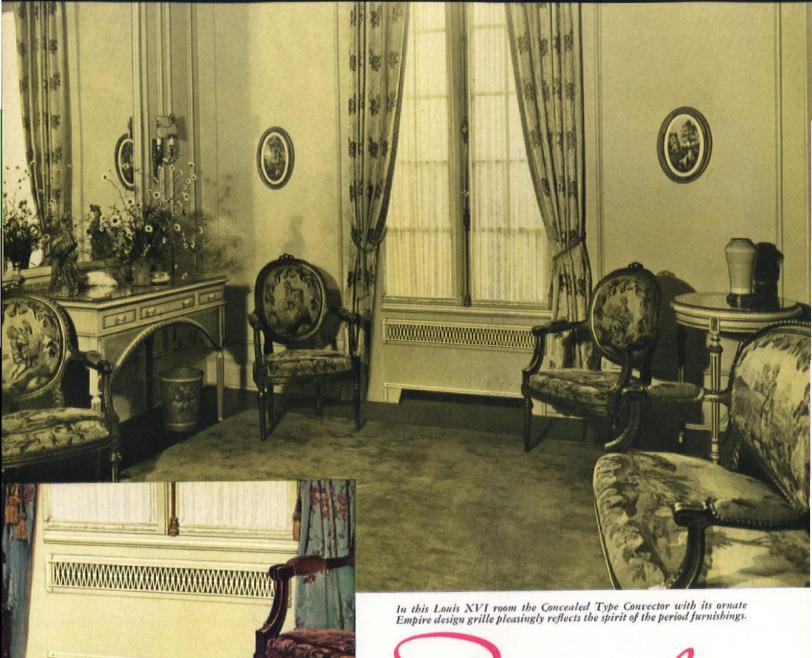
In the upper brackets, from \$5,000 to \$15,000, the bankers continued to dominate the style by their control over the mortgage. Their choice was largely a negative one: they continued to refuse Modern, but they would take pretty nearly anything else in a recognized style. In rebuttal Assistant FHAdministrator Miles L. Colean wrote his famed Technical Bulletin No. 2 in which he advised branch offices of the FHA to accept Modern providing the plan and exterior were truly integrated and truly functional.

With increased activity Merchandising. bright brains appeared within and without the subdividing business with new and old ideas on how to sell a house.

Architects Fordyce & Hamby wrote a widely circulated article to demonstrate to the architect and the builder what bets they were missing in the circulation, orientation, and skin treatment of their product. A onetime real estate salesman named Lawrence Wood travelled all over the Middle West and the Eastern seaboard introducing to newspaper editors a new idea which hinged on the patented name, "Craftsman." Talker Wood persuaded a selected group of material dealers in each town to subscribe toward a series of full page advertisements to appear in the local Press. Each advertisement featured a rendering and plan of a house especially designed for it by a local architect. A coupon in the advertisement brought the realtor to the prospect's house; the realtor called in the architect; and the architect ordered his materials from the dealers who paid for the advertisement. Talker Wood made a regular 15 per cent commission for placing the advertisement. The idea was tried in Cleveland, Cincinnati, Pittsburgh, many another town. Only criticism was that while it drew a great numer of queries (1,500 the first week in Pittsburgh), it led to very few sales indeed.

¶An outgrowth of this plan was the Boston Post Book of Homes. Containing plans, renderings, specifications, and prices for 30 houses, this book was published and publicized by the newspaper. Demanding 25 cents with the coupon, the advertisement series drew 9,000 answers, is still selling houses. Criticism was that the Post had no houses already built from which it could sell the prospects it got. Last month in Manhattan Builder W. Burke Harmon

(Continued on page 404)



Grille and framed lower opening, attractively finished in ivory, blend perfectly with the ivory wall treatment.

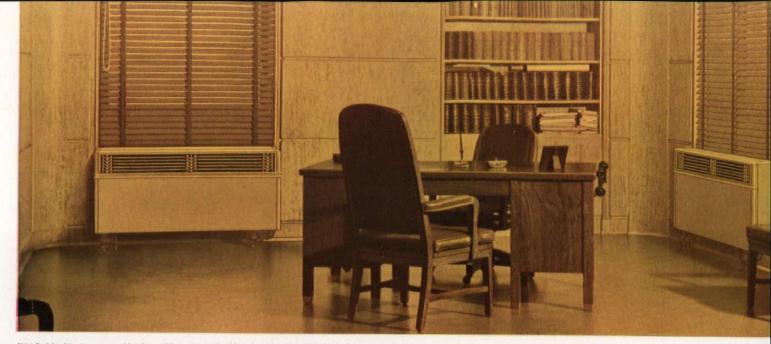
Gold-plated grille harmonizes with the period furnishings, its color enhanced by the ivory wall treatment.



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● Beautiful homes have to be heated, too. Architects have always appreciated the superior heating satisfaction of a steam or hot water system with Modine Copper Convectors. But now, for the first time, heating equipment has been considered from a new angle. A copper concealed heater has been created with enclosure and grille designs that are not only in keeping with the interior of the finest home or building—but by their own intrinsic beauty materially contribute to the embellishment of such a home or building.



With Modine's smart Modern Venetian Grille, the Modine Wall Cabinets conform in a most pleasing manner to the modern trend shown in office appointmen



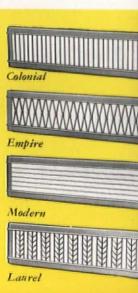


Four Modine Convector Enclosure Types are available-Concealed (shown on preceding page); Wall Cabinet (shown at top of this page); Floor Cabinet (shown in two cuts above); and Recessed. All enclosures are planned with an eye to color treatment adaptability. Rails and stiles have been put on different levels from each other and from main panels, so that color treatment may be effectively and inexpensively applied.

- for architect-designed building CONVECTORS with enclosures and grille that HARMONIZE with ROOM INTERIOR
- Truly beautiful designs . . . embodying a new idea of styling . . . ha been created for the new Modine Concealed Heater enclosures a grilles, by a nationally known furniture stylist. • The virtual custo built flexibility of grille design . . . patented and exclusively Modine . allows the architect new and individual freedom of expression. By mea of variations and combinations of the four elementary grille desig (shown below) he may at no extra cost choose a grille to harmonize wi any style, period, or special requirement, of the interior appointment of the finest homes, offices, hotels, or public buildings. . Modine grill are die castings having actual weight and depth. Being non-corrosiv their beauty may be still further enhanced by a plating appropriate to the style or period of the interior, and the design of the grille used. At slig extra cost any of Modine's concealed heater grilles may be supplied Colonial Brass, Antique Silver, Statuary Bronze, 24K. Gold, or Polishe Chrome plated finishes.
  - Write for New Catalog No. 136 .

### FOUR ELEMENTARY GRILLE DESIGNS

The number of grilles which may be created through the combination of the four elementary grille designs is limited only by the versatility of the architect or the requirements of the individual room. For example, the Modern Venetian grille of the Wall Cabinet Convector shown at top of page is a combination of the elementary designs, Modern and Laurel. The Colonial Classic upper grille of the Floor Cabinet Heater, shown at upper left, is a combination of the Colonial and Laurel. Floor Cabinet Convector at lower left is equipped with Modern grilles.



# In the Bellevue Psychiatry Building,

### CORKOUSTIC CEILINGS QUIET NOISE



Armstrong's Corkoustic ceiling in children's section of the Bellevue Hospital Psychiatry Building, New York City. The Corkoustic is painted six shades of ivory with Armstrong's washable Acoustic Paint.

BECAUSE Armstrong's Corkoustic offers a combination of properties seldom found in a single acoustical material, it was chosen for the children's section of Bellevue Hospital's Psychiatry Building. For example:

Corkoustic's sound-absorbing efficiency is 62 per cent at 512 cycles, which insures quiet in hospitals, schools, offices, banks, churches, auditoriums, and restaurants.

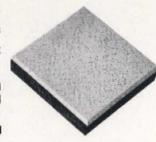
Its light-reflection efficiency ranges as high as 75.4 per cent—an exceptional figure for acoustical tiles. It is fire-resistant and an excellent insulator against heat and cold. Its pleasing variegated texture makes it an attractive interior finish with any style of decoration. It can be furnished in standard white, ivory, and buff, or in any special color.

Corkoustic is sanitary. Nonporous and non-fibrous, it does not attract dirt nor harbor vermin, germs, or odors. It can be washed with ordinary soap and water. Repainting does not destroy its efficiency—and it seldom requires painting more than once every six to ten years. It is easy to install without expensive special fastenings. And being moisture-resistant, it does not warp, mold, or decompose in swimming pools or high-humidity rooms.

Write now for file-sized "Decorative Walls and Ceilings That Quiet Noise and Correct Acoustics." Armstrong Cork Products Company, Building Materials Division, 1202 State St., Lancaster, Pennsylvania.

## Armstrong's CORKOUSTIC

Linoleum ~ Linotile ~ Accotile ~ Cork Tile ~ Rubber Tile ~ Linowall





Note the pleasing texture of Armstrong's Corkoustic. No two tiles are exactly alike in surface markings, thus eliminating monotonous, stereotyped ceilings.

## Simplicity

Mechanical simplicity is the dominant feature of all Dunham development. It is our belief that simple things, easily understood, work better - are better.

> SIMPLICITY is the keynote of good architectural design and of easily operated mechanisms. It is the keynote in the construction and in the operation of the Dunham Differential Vacuum Heating System. A simple, age-old principle-the relation between steam pressures and steam temperatures-is used.

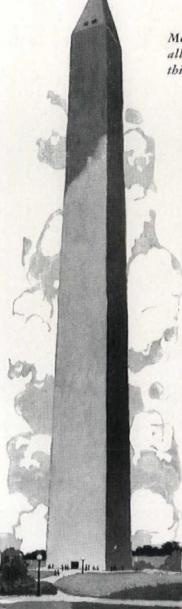
Simplicity governs Design. There are no complicated parts involved. The pump, radiator valves and traps, supply and return piping, the radiators and the source of steam supply are similar in design with those used in standard vacuum return line systems. Only minor changes are necessary in the methods of design used by the architect and the consulting engineer for the past several decades.

Simplicity governs Installation. The work of installation by the contractor is similar to that he has done heretofore. He has some additional equipment to install-a few simple controls.

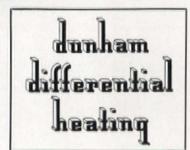
Simplicity governs Operation. The major difference between Differential Heating and ordinary steam heating lies in the control apparatus. This equipment simplifies the work of the operating engineer, it is automatic and as simple in operation as the accelerator in an automobile. It sets and maintains the rate of heating in proportion to the rate of heat-loss, just as the accelerator determines the speed of an automobile at the desired rate of travel.

The accumulated experience of the entire Dunham Organization is at the disposal of

Architects, Heating and Ventilating Engineers and those who finance and manage properties. This cooperation is available for Modernization Work, as well as for new construction in industrial, commercialandother projects.



In its utter simplicity lies the greatness of such a memorialastheWashington Monument. All great things in the realm of mechanical invention must of necessity be simple in construction and in operation.



### C. A. DUNHAM COMPANY

450 East Ohio Street, Chicago

Over eighty sales offices in the United States, Canada and the United Kingdom bring Dunham Heating Service as close to you as your telephone. Consult your telephone directory for the address of our office in your city. (Continued from page 400)

went the Post plan one better with a similar book which contained fifteen designs, plus fifteen houses already erected



on his various properties. Endorsed by the local chapter of the American Institute of Architects, also priced at 25 cents, and advertised in fifteen consecutive full-page advertisements in the metropolitan press

(paid for by cooperating manufacturers), Builder Harmon's plan was expected to do extremely well for itself.

¶Long Island's super-stiff competition brought out some excellent ideas. One of the most rudimentary, and yet one of the most effective, was that used by Gross-Morton, who put up small cardboard signs

all over their model houses calling attention to such features as double coats of plaster, oak flooring, tiled floors in the baths, etc. Levitt Brothers (William S. and Alfred) continued to write the best advertising copy



William Levitt

in the business around their Manhasset subdivision, copy which reached the top for newsworthiness with the full-size reproduction of a letter from Owen D. Young. The occasion, of course, was another large order for G.E. stock.

Finally, in Washington, Mrs. Virginia Nowell unveiled her Jane Brown Service

Virginia Nowell

for the use of Waverly Taylor, Inc. Granted a house whose plan and construction are in conformity with the demands of a committee of housewives gathered together by Mrs. Nowell, pretty Jane Brown will relate

for the daily press her adventures in supervising-with her unidentified fiancé-the construction of a house. Cooperating material dealers buy the space required for these stories, the subdivision draws good crowds, and Mrs. Nowell makes a fat fee. People. Newsworthy events of the year lead off with the first subdividing efforts of Senator James Couzens of Michigan, onetime Ford partner who last month was defeated in his fight for reelection when he deserted the Republican fold to campaign

(Continued on page 406)

More and More Architects are Specifying

# RUBBER FLOORING

FOR LARGE OFFICE SPACES



ROM the Reception Room to the Shipping Department; from the Comptroller to the Janitor-Goodyear

Rubber Flooring has won its popularity as the ideal flooring for business offices. Here Architects: Albert Kahn, Inc.

DURABILITY - Goodyear Rubber Flooring "stays put"; withstands heavy traffic for years without

CLEANLINESS - impervious to tracked in dirt. A

STAIN-RESISTANT - not marred by dropped cigarettes or matches; nor stained by alcohol, ink

QUIET - its resiliency minimizes noise in offices, corridors, lobbies and reception rooms.

BEAUTY-rich two- and three-tone colors that permanently retain their hues.

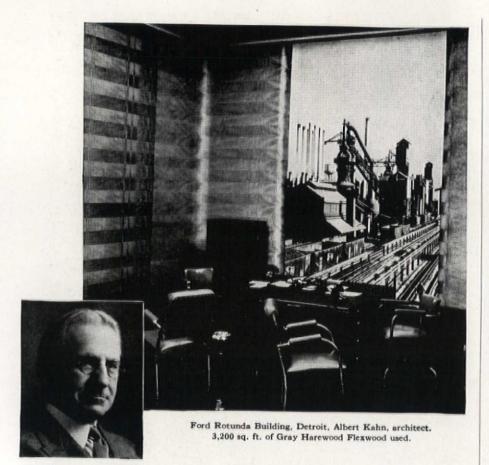
STYLE - wide choice of designs and borders adaptable to any decorative motif.

### Available in Two Types

GOODYEAR RUBBER TILE - laid in individual blocks of any specified size, shape and color in any desired pattern-a de luxe floor that will endure for many years to come. GOODYEAR WINGFOOT SHEET RUBBER FLOORING-laid in continuous lengths at about the same cost as good linoleumthe most economical, permanent covering for large floors; available in more than 100,000 different designs. For full data, write Goodyear, Akron, Ohio, or Los Angeles, California.

See Sweet's 1936 Architectural Catalog for complete specifications





### "Wood in No Other Form Approaches Flexwood in Cost, Ease and Speed of Application"

Albert Kahn, internationally known architect of Detroit, has a reputation for giving dollar-minded automobile manufacturers the most for their architectural dollar.

His modern and efficient manufacturing plants, office and public buildings have made him pre-eminent. It was logical that Mr. Kahn should choose Flexwood for an important phase of the decoration of the Ford Rotunda Building. From the wide selection of flitches of rare woods available, he selected Gray Harewood. Mr. Kahn says:

"Flexwood was specified because as a decorative medium, it made possible modern wall treatment in genuine wood at minimum cost. Exotic Gray Harewood was chosen because it harmonizes with the black pilasters and photomurals. Wood in no other form could have accomplished the desired treatment better than Flexwood."

Flexwood is genuine wood veneer mounted on cloth. Flexwood, because it is wood, takes any wood finish. Please write for complete data on this modern way of wood panelling.



UNITED STATES PLYWOOD CO., INC., 103 PARK AVENUE, NEW YORK Manufacturers of Flexwood, Plywood, Armorphy, and kindred products

(Continued from page 404)





Senator Couzens' Oakland Housing venture in Michigan shows a sound though bare plan (top), a sound though bare architecture (below).

on a Vote-For-Roosevelt platform. Year ago he ante'd up \$550,000 to form the Oakland Housing Corporation for the construction of low cost housing in cooperation with FERA, which had chipped in \$300,000 of Government funds. With the aid of Architect Barton P. Jenks he was ready last month to open a subdivision of 50 houses on 850 acres in Pontiac (see cuts, above), featuring in cement and wood a classically simple solution to the low-cost house.

In Philadelphia those two veteran builders, Messrs. Charles George Erny and James Aloysius Nolen clinched their record as Depression's heaviest builders by finishing the four thousandth house to be built by their organization since 1930 (see cuts, p. 68). Biggest land deal of the year was consummated out in Los Angeles by Publisher Harry Chandler of the Times. Already the owner of an 860,000-acre ranch in Mexico, two others of 300,000 acres in New Mexico and Colorado, besides much Los Angeles land, he bought 2,500 acres just outside the city. Sales price of the deal was \$2,227,000.

In Cleveland, where the Depression hit hardest, real estate began to come back at last as business rose, and Shaker Heights broke into the news as the Van Sweringen brothers announced reorganization plans, broke in once again as Brother Mantis died, in February. Nichols, with 4,000 acres of land, found its claim to the largest unendowed subdivision in the U.S. still secure, while the Janss Investment Corp. maintained its second place position with 3,300 acres. Far and away the most exclusive subdivision ever to be conceived came into existence next to the Long Island

(Continued on page 68)



# Window Sensation of the Year-

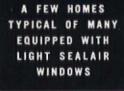
 Light Sealair Windows of solid aluminum or bronze, fabricated by Kawnee















NE of the most important of many new and improved building products is the Light Sealair Window, developed and introduced by Kawneer in 1935 firmly established in 1936.

Sturdily fabricated from light sections of solid aluminum or bronze alloys, they bring many obvious advantages. Moderately priced, they can be used in the average home, at a cost only slightly higher than the complete installed price of ordinary windows.

#### POTENT APPEAL

Significant to architects and builders is the fact that owners are so enthusiastic . . . that every installation has attracted wide and favorable interest . . . that people want these modern windows in their homes.

COMPLETE UNIT. Light Sealair sash are glazed and installed in frames at the factory, and shipped complete, ready for speedy, oneman installation. (Local glazing optional.) Patented, removable Inside Glazing Stops permit re-glazing on the job, without removing sash. Sash may be divided as desired.

SIZES. Units are furnished in even glass sizes up to 36" in width. Larger sizes, stationary units, French doors, etc., special.

EASY ACTION. Fingertip pressure opens and closes these windows at all times, in all seasons. Swelling and shrinking of wood are eliminated. Simple construction on time-tested double-hung principles, and careful fabrication by window craftsmen are also factors.

UPKEEP SAVINGS. The use of solid rustless metals eliminates rusting, rotting out, warping, swelling and shrinking... makes painting or refinishing unnecessary. Hence maintenance cost is reduced to the vanishing point.

MODERN BEAUTY. Soft, attractive color of aluminum, or weathered effect of bronze harmonizes with any type of home or building.

MORE LIGHT. Narrow members admit 15% more daylight.

WEATHER-TIGHT. Sash slide on integral weatherstrip guides, and interlock at head, meeting rail and sill. Screens and storm sash in same metal are available, suitable for airconditioned homes.

MODERATE PRICE. Once the facts are known, few people hesitate to invest the slight additional first cost in these practical and economical windows.

Kawneer Light Sealair Windows are truly better windows . . . since they satisfy the basic requirements for residential windows more completely than previous types. Write today for complete information. THE KAWNEER COMPANY, NILES, MICHIGAN.



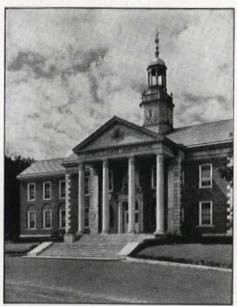


STORE FRONTS · DOORS · WINDOWS

## COUPON BRINGS DATA The Kawneer Company, Niles, Michigan Send illustrated booklet and F. S. Details on Light Sealair Windows.

ADDRESS

Architect Dealer Owner



George F. Baker High School, Tuxedo Park, N. Y. Guilbert & Betelle, Architects

One of the many schools on which these architects have specified and used MINWAX FLAT FINISH during the last 15 years.

## Thousands of Scuffling Feet every day

Every day at the George F. Baker High School in Tuxedo Park, N. Y., pupils race up and down the halls, trudge in and out of classrooms with the unthinking carelessness of boisterous youth. Think what punishment these restless, scuffling feet give floors!

Yet floors finished with



STAND UP because MINWAX is IN THE WOOD not merely on the surface!

It Stands to Reason
. . . if floors finished with Minwax will stand
up under the incredible abuse given them in
this and many other schools, then the private
home owner should get the same lasting satisfaction and practical freedom from maintenance costs. Minwaxed floors never need
rescraping! As to beauty, Minwax is the
modern adaptation of old-time waxing methods. It gives that mellow, lustrous wax finish
that develops the natural beauty of the wood
and brings out all the beauty of the grain.
Leading architects have continued to specify
Minwax for floors, paneling and trim for more
than 20 years. Endorsed by M. F. M. A.

Minwax products are catalogued in Sweets—but you are invited to write us at any time for more specific information.

### MINWAX CO., INC.

11 W. 42nd Street

New York

In Canada: THE ATLAS ASBESTOS CO., LTD., 110 McGill St., Montrea (Continued from page 406)





Shull Photo:

Builders Erny and Nolen made Erlen in Philadelphia a record seller. Its rear elevations (below) outshine its front (above).

estate of Stewart Iglehart, son of the owner of the Grace Line, and international poloist. To prevent any unwelcome neighbor from moving into a choice 40 acres in the middle of Pololand, Subdivider Iglehart put up a fine white house from the boards of Delano & Aldrich, garnished it off with some classic landscaping and a swimming pool, and stuck a price tag on the whole estate of \$60,000. Whether or not he will build more on his subdivision depends on how soon and satisfactory Subdivider Iglehart's first sale proves to be.

Models. The Model House of 1936 was no better than usual. It is traditional that while the Automobile Show gives the U.S. improvements in style and engineering each year, the National Home Show that is the Model House invariably sticks to last year's ideas, and changes nothing but the pattern in the linoleum. This year, generally speaking, was no exception, and public taste—lacking inspiration—bogged into the old, mediocre choices.

A happy exception to this case was afforded by several of the manufacturers, who sponsored model houses to display their own building products. These houses were usually somewhat better in design and construction than the models put up by subdividers, and the public recognized this fact by dubbing the manufacturers' offerings "exhibition" houses.

The leaders in this type of house were General Electric and the Reynolds Corporation. The latter concern did more than any other company for the advancement of the model house by its displays of the construction methods used in its own Rey-

(Continued on page 70)

# How About the AWNING In Your Plans for the MODERN STORE FRONT?



### ASTRUP MECHANISM and ASTRUP TENSO-LOK ARMS are the Answer to Your Problem . . .

Practically every type of store demands Sun Shade protection. Experience has proven that Awnings best fulfill this requirement. Tests show that awnings not only keep stores 16 to 20 per cent cooler but materially reduce expense where air conditioning is installed.



The problem is to have the awning installation blend with the architectural design. Recess awning boxes and concealed awning enclosure panels are the answer. When Astrup Awning Mechanism and Astrup Tenso-Lok Arms, particularly designed for this type of construction, are used there are no protruding awning metal parts to obliterate the architectural beauty of the store front and the ideal in store protection is assured. The two illustrations above show the front of Stouffer's Restaurant, Playhouse Square, Cleveland, Ohio; Architects: Ockert and Teare. In top picture awning is rolled and recess box lid closed. Note no metal parts are visible. Write today for photostatic details and complete information on recess boxes and concealed enclosure panels.

### THE ASTRUP COMPANY

Established 1876 2937 West 25th Street CLEVELAND, OHIO





Marquette Building, Chicago, Ill.

### REDUCE HEATING COST \$6,931.92 IN TWO YEARS

16-Story Chicago Building Uses Webster Moderator System to Slash Steam Consumption

### CUTS COST OF INSTALLATION

Chicago, Ill.—The cost of heating Chicago's 16-story Marquette Building was reduced \$6,931.92 in two heating seasons as a result of application of a Webster one-pipe Moderator System in the fall of 1934.

The Webster Moderator System was originally designed for two-pipe steam heating systems, but by incorporating certain modifications in the control it was possible to avoid the cost of installing separate return piping and at the same time produce results reasonably comparable with those obtained by controlled two-pipe systems.

During 1934-35, steam consumption was reduced 3,139,000 lbs., the equivalent of \$2,594.29. Steam savings for 1935-36 were 4,846,000 lbs., a cash reduction of \$4,337.63.

4,846,000 lbs., a cash reduction of \$4,337.63. The method of computing the steam savings was developed by Mr. Earl Shultz, Vice-President of the Illinois Maintenance Company and agent of the Marquette Building. Mr. Shultz' method of measuring the savings served as a basis for an article, "Determination of Heat Saving" in Skyscraper Management, a leading building management publication. A few reprints of this article are available for interested building owners and managers.

In addition to reducing heating costs, the Webster Moderator System regulates steam circulation in the Marquette Building so that the entire building heats evenly and rapidly. The Marquette Building has 46,930 sq. ft. of installed direct radiation. William Lees, Inc., of Chicago, acted as modernization heating contractors.

If you are interested in heating new buildings, or in improved heating service and lower heating cost in your present building address

WARREN WEBSTER & CO., Camden, N. J. Pioneers of the Vacuum System of Steam Heating Branches in 60 principal U. S. Cities—Estab. 1888

(Continued from page 68)

nolds "Specification" houses. These not only drew large crowds but gave the salesman a talking-point considerably more barbed than he had habitually possessed. Meanwhile model houses of all types demonstrated a pre-Depression virility, drawing crowds averaging around 5,000 a day, and going up as high as 15,000 and 20,000.

Rental. Seen in the perspective of its decade 1936 Subdividing may well come to be more deeply significant than it now seems. Its actual, visible advances over recent years, though interesting and heartening, have not by any means been great. But what has provided the sincerest promise for the future of Subdividing has been the appearance in the field of the responsibly built, limited dividend rental subdivision. This type of project was first used by the Buhl Foundation, whose Chatham Village in Philadelphia has made money ever since it opened in 1932. Early this year the FHA began a serious campaign for rental houses, and it is this backing which lends to the Home-For-Rent implications very important to U.S. Subdividing. Reason: More people can afford to rent a house than can afford to buy one.

A house built for rent will cost its tenant about as much to live in as does one on which rests a 20-year amortized mortgage. But the potential list of rentors will be much greater than the potential list of buyers for the reason that no down payment is required to rent a house. And at the end of the 20 years now required to own a house, its market value—if it is in the low-price class—is practically nil,

The public has been carefully and continuously educated to the virtues of homeownership. It might conceivably be just as easily educated to believe in renting its home—and saving the difference in equity and upkeep costs.

A home in a rented project means an upkeep service guaranteed and paid for by the landlord. And, above all, a home in a rented project means a continuing interest by the builder, than which there can exist no more cogent guarantee of quality in construction.

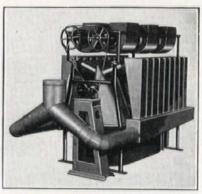
These reasons are strong reasons for the success of the rental project, and they are reasons which every subdivider had best mull with care for his own protection. For the change from sales to rental will hit him in one vital spot: his profit can no longer come so quickly and so abundantly from the land; he would then have to build his houses not to sell land but to be lived in. Which is to say that he would have to build better.

In the list of good homes for rent, Chatham Village does not stand alone. On or about November 1, 1936, construction will begin on some 400 new rental homes outside of Washington, D. C. Rentals will average less than \$12 per room per month. Builder-Owner is Allie Freed, Chairman of the Committee for Economic Recovery.

# Architects Who Have Used

## Dailaire

Systems of Heating and Air Conditioning Specify Them Again Because of Their Unusual Value



Complete seven stage air conditioning for Summer and Winter, all within one cabinet.

Includes, preheating, washing, filtering, direct fired heat, circulation, dehumidifying and positive cooling.

### Dailaire Pioneer

### Features Include

- · Stainless steel combustion dome.
- Divided flue construction.
- · Overhead multiple blower.
- · Washers and filters inside casing.
- · Counter-flow air travel.
- Preheating of air before washing.

Tried and proven through six seasons in the field, and are making a remarkable record in fuel economy, in many cases saving as high as 40 per cent.

Complete new literature on this pioneer equipment is now available.

Special designs for oil, gas or coal. More than 100 combinations, ranging from 100,000 B.t.u. to 750,000 B.t.u. Also many sizes of split steam conditioners.

Write immediately

### DAIL STEEL PRODUCTS CO.

300 Main Street

Lansing, Mich.



Leet Bros.



### SUBDIVISION TYPES

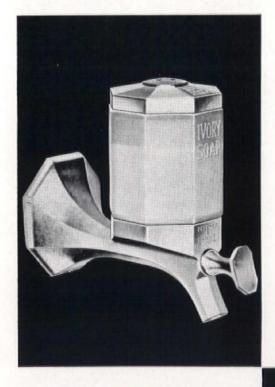
Poloist Stewart Iglehart built this French style house (upper left) on 40 acres next to his own estate, and priced it at \$60,000 to keep undesirables off the World's Most Exclusive Subdivision. At the same time, an incredible number of builders were putting up thousands of half timber and brick veneer houses (upper right) in subdivisions a great deal less exclusive. A better-than-average type is exemplified by the Miller Brothers' house (center left) in Washington, D. C., which will sell for about \$10,000 and be well worth it. On Long Island the Mott Brothers will sell a great number of houses this year (center right) for less than \$10,000 by advertising them as "Custom Built." Nine out of ten subdividers this year favor the Colonial style in architecture. A tenth man is Subdivider Stockton who builds in the Monterey style (lower left) for the good reason that he does business in Florida, 80 of whose citizens have already paid him from \$5,000 to \$10,000 for a house such as this during 1936. How the current Colonial style can be adapted to unaccustomed surroundings is nicely demonstrated in this thoroughly indigenous version of the Colonial type by Subdivider Prather in Dallas, Tex. (lower right).



John Binert







# BETTER DESIGNED PUBLIC WASHROOMS THE ORDER OF THE DAY

More and more business men are insisting upon better designed public washrooms. In these days of keen competition they are realizing the importance of proper wash-up facilities in attracting patrons and winning good-will.

You can meet this growing demand by specifying Ivory Soap Dispensers for public washroom installations.

Here is a modern soap dispenser which combines beauty and utility in generous proportions . . . which assures unusual satisfaction to the user . . . which is economical in first cost and in up-keep.

Ivory Dispensers add a touch of distinction to the thoughtfully designed modern washroom. They fit in perfectly with new construction or modernization plans.

See Sweet's for technical details or write for illustrated folder describing the many unique features of Ivory Dispensers,

### IVORY SOAP DISPENSERS

The Ivory Soap Dispenser delivers genuine Ivory Soap in fine, free-flowing flakes or granules. Gracefully designed. Self-contained. No complicated piping system to clog or get out of order. No parts to rust, tarnish or corrode. Always delivers.

## Jvory Soap DISPENSER

Procter & Gamble

Cincinnati, Ohio



S CALE is one of the most troublesome problems encountered in steam circulation. You know what happens. Clogging of tubes, improper steam circulation, possible freezing of tubes in cold weather and lowered efficiency at all times.

Don't let this worry you any longer. The new Aerofin Crown Orifice has been designed to overcome just such difficulties. Scale simply can't lodge in the tube opening of Aerofin heating surface equipped with the Crown Orifice. The irregular projecting points (see illustration above) set up an effective barrier against scale, yet allow free passage of steam when required. The sharp points also break up the scale so that it can easily pass through the tubes.

The Aerofin Crown Orifice is another example of the outstanding merit of Aerofin forced air heating surface and another of the many reasons why architects, consulting engineers and progressive heating contractors specify Aerofin. It's a typical example too, of the way that Aerofin brings you timely improvements that solve practical heating problems.

It will pay you to investigate Aerofin right now. Let Aerofin's home office or any of its branches study your requirements. The prompt,

personal and technical co-operation of its engineers is always at your service. Take advantage of it today. Write our nearest office.

AEROFIN
is sold only by
Manufacturers
of Nationally
Adversised
Fan System
Apparatus.

AEROFIN CORPORATION
850 Frelinghuysen Avenue
Newark N.J.

Chicago Detroit New York Philadelphia

### MEN AND DEEDS

(Continued from page 11)

uncomfortable label of Democrat or Republican (July). But Allie Freed had proved a stout talker, and his researchers were able men, so that the repercussions of the Committee's idea were slow to die. Freed himself toured the country and gave every place but whistle-stops his dynamic diagnosis-damnation of Building, and his name began to appear on all sort of committees, and finally he went to the White House. In Manhattan the local realtors had taken the Freed talk very much to heart and met Wednesday after Wednesday to discuss their wonderful

chances to capitalize through cooperation. But nothing came of it until Lewis Brown, sharpeyed President of Johns-Manville, came out with his Radio Forum of the Building Industry in January over a coastto-coast hook-up. "What I need," said a composite contractor to the microphone, "is a selling plan." Nub of the Brown plan then emerged as a selling campaign by which the industry was to center its effort on and gravitate around the local supplies men.



Bernard Hoffman

J.-M.'s Brown

The idea hung tentatively in the ether for a while, then drifted away, leaving President Brown's reputation as a smart merchandiser considerably enhanced.

Integration reached its smallest and most efficient compass in the realm of research. It was widely recognized that a great deal was being done behind the closed doors of the biggest companies, but very little of the exact nature of the work was divulged. Over at Purdue Frank Watson continued his inquiry into the nature of the house by getting six prefabricated houses under roof. The Portland Cement



Portland's House

F. M. Demarest

Association talked of putting up all-cement houses and the steel companies continued their grim search for construction systems. In its all-glass laboratory at Toledo, Owens-Illinois not only celebrated President William E. Levis's most phenomenally successful product—the glass block—but also continued the research which was bringing the company more and more notice. The Reynolds Company, having put enough products under its wing to boast that it could supply 35 per cent of the materials in a house, began to promote their use with an intensive campaign centering around the "Reynolds Specification House," a product which it backed up with a private finance company. President Howard Bonbright of Briggs Plumbing introduced pressed steel plumbing on the

(Continued on page 74)



Offers a Really New Bath—the NEO-ANGLE

• New designs, new arrangements and new color effects in the bathroom are possible now with America's most unusual and practical bath—the "Standard" Neo-Angle. In small homes, large homes, old homes and new homes, this sensational, new square bath gives Architects a freedom of design that has created a new interest in bathrooms.

Only the "Standard" NEO-ANGLE, with its convenient seats in two oppo-

site corners, provides all the bathing features every family wants — a roomy tub bath, a splash-proof shower and a handy foot bath — all in a single bath fixture. The Neo-Angle Bath measures only four feet square, yet the bathing space is as long as a 5½ ft. built-in tub, and 6 inches wider. Write today, for literature showing the many new ways you can use the "Stattdard" Neo-Angle Bath.

## Standard Sanitary Mfg. Co.

PITTSBURGH, PA. Division of AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

## with its eight exclusive features

- HANDY BATHING Two handy seats in opposite corners give a new freedom in bathing.
- 2 ROOMY BATHING Full-size bathing room with broad seats and rims for hand or arm rests.
- PRACTICAL BATHING Plenty of room for two children, with a handy seat for mother or nurse.
- SAFE BATHING Easy to sit on the corner seat and swing your feet over the side and into the tub.
- 5 CONVENIENT FOOT BATH Quick relief for weary feet with this convenient foot bath.
- CAREFREE SHOWER—Sitting for a shower brings a new luxury—especially for the aged, weary, or the invalid.
- 7 COMFORTABLE BATHING—It's so easy to sit on this comfortable seat to soap and scrub.
- IDEAL SHOWER BATH Plenty of elbow room without any danger of splashing water all over the bathroom.



Western Electric's new sound distributing equipment is high in quality, low in cost. In one compact unit, it combines voice or music pick-up-radiorecord reproducer-and keys for selecting loud speakers in as many as 60 locations.

Graybar's experts will gladly help you plan installations and furnish estimates free of charge. For booklet and full details, write Graybar Electric Company, Graybar Building, New York, N. Y.



### MEN AND DEEDS

(Continued from page 72)

market to perturb the more far-seeing of his competitors, and astounded the rest by getting his product installed in Senator James Couzens' low-cost development near Pontiac, Mich. Weyerhauser Lumber and the American Radiator Company also did their bits.

Passing from the material to the finished house-from research and unification to prefabrication and promotion-



G.E.'s Snyder

William Nelson

there was first and foremost Carl Snyder's speech at the A. I. A. convention. Interrupting his efforts at unification in the G. E. offices of Homes Inc., (Motohome) he put the prefabricated house authentically in its place with the declaration that it was interesting-but still very much around the corner. Some few months prior to this speech a Southerner named B. E. Moses had engaged Architect William Van Alen (Chrysler Building), who produced the designs for an

all-steel house which appeared on Manhattan's Park Avenue (Aug. '36) and was twitted by The New Yorker for having wooden lintels. Out in Milwaukee an old hand, the

Harnischfeger Corporation, introduced a new product in a self-supporting prefabricated panel which subsequently appeared in 50 houses. In Rockefeller Center's International Building appeared Bernard G. McGarry as president of the newly formed Arcy Corporation, which featured a steel frame developed at Carnegie Institute. And finally the sanguine Mr. Foster Gunnison, having severed connections with Houses, Inc., reappeared with a Builder Moses new prefabricated house called



MagicHomes, a confusing name. The MagicHome proved to be made mostly of three-inch plywood, and in Louisville Prefabricator Gunnison built six of them in ten days, a feat which incensed the suspicious natives. Then, warming to his work, he put up the seventh in three, and proceeded on to Arizona, leaving Louisville nervous and in a quandary (Aug. '36).

Thus the record for integration. The advances made nobody dizzy, but they were, definitely and encouragingly, advances. Per contra, the most disintegrating item of the year came from Detroit, where the Dearborn Inn was discovered to have both complete air conditioning and double hung windows, a combination so complicated in its implications as to unnerve completely the slightly irresolute.

#### SMALL HOUSE

IF integration was the biggest idea of the last twelve months, the biggest fact was certainly the less-than-\$5,000 house. Not only was it the largest building category in the widely heralded building boom; it was pretty nearly the whole boom all by itself. Houses for less than \$5,000 there cer-

(Continued on page 82)

# Less Work More Living

in homes equipped with g<u>as</u>



TODAY, MORE THAN EVER, homes are built to be lived in. In addition to the full measure of convenience that is the keynote of modern living, gas brings a confidence in dependable performance that is unequalled by any other fuel.

In the kitchen, the automatic gas refrigerator has an unsurpassed record for *silent*, trouble-free operation. Automatic lighting, dependable oven-heat control and effective insulation make the modern gas range a speedy, agreeable assistant. And for completely effortless com-

fort, up-to-date automatic gas water-heating and house-heating equipment stands in a class by itself.

Gas has a background of dependability and economy that has made it the accepted fuel in 15,000,000 homes. People know this perfect fuel, and trust it. In addition to its many other advantages gas brings definite economies to homes equipped to use this perfect fuel for every heating need. Your local gas company will gladly cooperate with you in the selection and installation of modern gas appliances.

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# GIUES YOU TRUE AIR CONDITIONING and FULLY AUTOMATIC GAS HEAT

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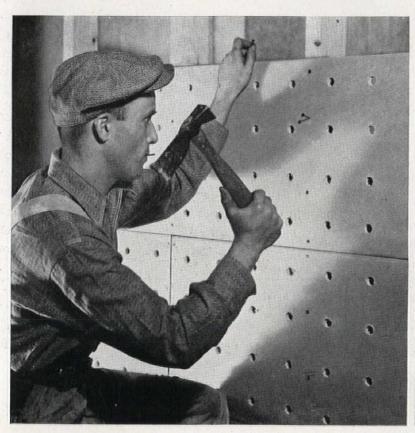
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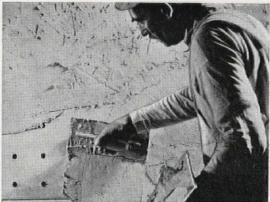
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RCHITECTS everywhere are enthusiastic about this new colored pencil. It has four unusual advantages.

First, you can actually PAINT with a Mongol Colored Pencil. By simply going over pencil masses with brush and water, water-color effects for foliage, facades, etc. are produced perfectly. Second, Mongol Colored Pencils come in 24 different colors, so that there is no wasting of time in blending, as is necessary with water colors. Third, the Mongol Colored Pencil sharpens neatly either to a chiselpoint or needle-point, speeding up shading and permitting minute detail and delicate line work. Fourth, its sharp point is also strong, will not wear down quickly or snap off readily.

Many architects have discovered that by quickly pencilling in different colors to indicate different materials on specification plans, builders can follow specifications more easily - make less mistakes. Have you tried it?

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### MEN AND DEEDS

(Continued from page 74)

tainly were in enormous quantities, some good, most mediocre-and some awful. On Long Island, which leads the country in residential building, the over-\$5,000 house was the exception. In Philadelphia, Messrs. Charles George Erny and James A. Nolen finished the last of 4,000 small houses erected since 1930. Down South in Memphis two contractors put up a score of houses to sell for \$2,500 with land (Aug. '36). Outside Chicago a man named Fred J. Walsh built houses and sold them with an acre of arable land for \$4,000 each. The Federal Housing Administration cautiously released plans for houses to sell, under socalled "minimum specifications", for \$2,500 (Apr.). At once builders jumped on the plans, and rushed specimen "FHA minimum houses" to completion. One of them erected the tropical model several hundred miles above the Mason-Dixon line. However, the National Lumber Manufacturers Association saved the day with a sedate version of the new house, done completely in wood, outside of Washington (July), and, in New Jersey, Builder Charles H. Reis announced that he would shortly build 1,000 of them (July).

This silenced everybody. But the bottom in price for houses for the year was hit in Boulder City where 700 houses formerly used by the Dam workers were put on sale at \$250 apiece (June).

Meanwhile the case of the cheap house had proved to be especially puzzling to the architect. At first it did not seem possible that so small a price could contain a living fee for the architect in addi-

**Administrator MacDonald** tion to its other profits. Architect Arthur E. Allen of Long Island demonstrated one solution to the problem by putting his name to designs for

1,000 houses over the summer. Allmon Fordyce and William I. Hamby, two up-and-coming architects in Manhattan, pointed out another solution in the January issue of THE FORUM: Let the architect merchandise his wares, let him tap the cheap market by better planning plus smart variation

of exterior treatment. Out in Queens Village, near New York City, the Mott Brothers, two old-time builders, showed a third answer. They hired a full-time staff of architects, and built twenty model houses. The public was then invited to build what it liked so long as it did not copy the twenty



Fordyce & Hamby

models. Because the public rarely had the imagination to change more than a gadget, the Mott Brothers rarely had to depart from stock sizes in materials and equipment. This scheme was obviously the ultimate: it gave the purchaser a home whose design he could call original, at a

These solutions to the question of getting the architect aboard the boom seemed to have pleased nearly everybody but the architects who did not get aboard. To comfort them there was thereupon invented the Home Clinic. The first clinic on record appeared in Buffalo, was later followed by others in Baltimore, Cleveland, Columbus, Washington, and presently one and all received the parental blessing of the

(Continued on page 84)

HARD MAPLE FLOORS are widely used in the Mary Lee Burbank School, Belmont, Mass., designed by Architect Robinson.



"Floors are the place to cut costs!"

George Ernest Robinson, Architect, Boston.

"After considering expense versus durability," explains Mr. Robinson, "I select Maple for floors in preference to other wood because it stands the test of time and wear in school construction. I would rather try to save in some other place, if required to stay within a certain budget, than to use construction which would be detrimental to the building."

HARD MAPLE is used in classrooms and gymnasium of the Tupper Lake Central High School, designed by Architect Graham.



Experience proves that it pays to specify MFMA

Robert R. Graham, Architect, Middletown, N. Y.

"Over a period of years," says Mr. Graham, "there is no
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# What LEADING ARCHITECTS Say About FLOORING:

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Temple Buell, Pres., T. H. Buell & Co., Architects, Denver. "Maple's tough, close grain and the even texture of its fibre," writes Mr. Buell, "have given our clients such satisfactory service as testified to by testimonials from them, that we have made it our standard specification. We fight to economize, because we know from our years initially obtaining the best,"

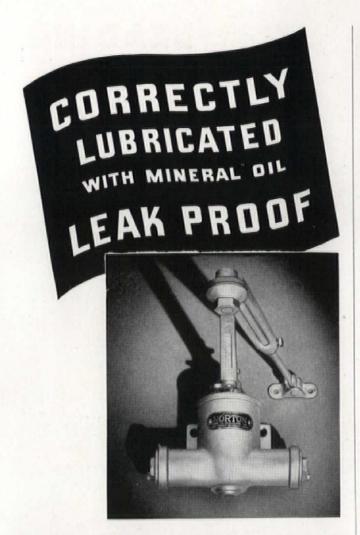
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DOOR CLOSERS FOR ALL TYPES OF DOORS

### MEN AND DEEDS

(Continued from page 82)

American Institute of Architects. The A.I.A. approval made everybody breathe more easily, since the essence of the clinic plan was to reduce architectural fees-a practice hitherto heavily deplored by the Association.

#### GOVERNMENT

During the last twelve months Peter Grimm left the Treasury in Washington to return to New York (Mar.). Stewart McDonald succeeded James A. Moffett as Administrator of the Federal Housing Administration (Sept.). Frederick M. Babcock expounded the science of risk-rating mortgages (Aug. '35). Work was begun at Berwyn, first of four greenbelts, under the Resettlement Administration (Oct.). A new

and liberal Federal Reserve was inducted (Feb.), and subsequently changed the credit base of the U.S. for the first time since the formation of the Federal Reserve System thirteen years ago (July). Senator Wagner introduced his Housing Bill (Apr.), and watched it starve to death for lack of Presidential interest. A feud of principles between WPA's Harry Hop-kins and PWA's Harold Ickes was settled in favor of Hop- Realter Grimm kins (Oct.). WPA produced



prefabricated outhouses, and PWA built a village at Passamaquoddy in which the houses were left without cellars to facilitate their being moved. PWA closed its books after taking contracts for 50 low-rent housing projects

(July), and the Resettlement Administration closed its after planning four greenbelt towns and being enjoined from building one of them, at Bound Brook, N. J. (May). All these things happened and were interesting and of moment for a while. But none of them seemed of as much moment as another set of facts about Washington which received less currency in the press.



Senator Wagner

There was for instance the appearance of "The Middle Way" by Marquis Childs. A book about how the Gallant Knight Cooperative downed the Dragon of Monopoly in Sweden, it was read by the President and deeply studied

by all the best New Dealers. And also to be noted was the fact that at Hightstown, a community built by Re-settlement (June), rents were based solely on ability to pay-a decision incidentally reached by a department billeted in the five floors of Evalyn ("Father Struck It Rich") Walsh Mc-Lean's old home, a house whose extraordinary interior is supposed to have prompted Appraiser Babcock



(Continued on page 88)

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# Behind THE WALLS STREAMLINE In these representative buildings and in thousands

• In these representative buildings and in thousands upon thousands of others throughout United States and Canada, from the modest home to the largest commercial structure, STREAMLINE Copper Pipe and Fittings have been provided for their many outstanding advantages.

One of the most important is that STREAMLINE furnishes absolute safety in concealed work where pipe lines are installed behind walls, floors, partitions or ceilings. The hidden leaks, which gradually develop with threaded fittings and rustable piping materials, causing extensive damage to furnishings, inconvenience—and costly repair to the line itself, cannot happen with STREAMLINE.

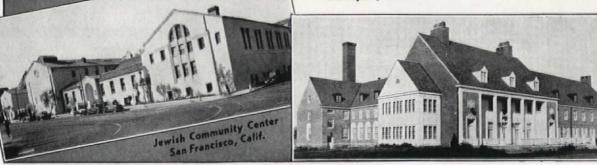
Whether the installation is for new construction or remodeling, it is a permanently lasting one, as long as the building stands.

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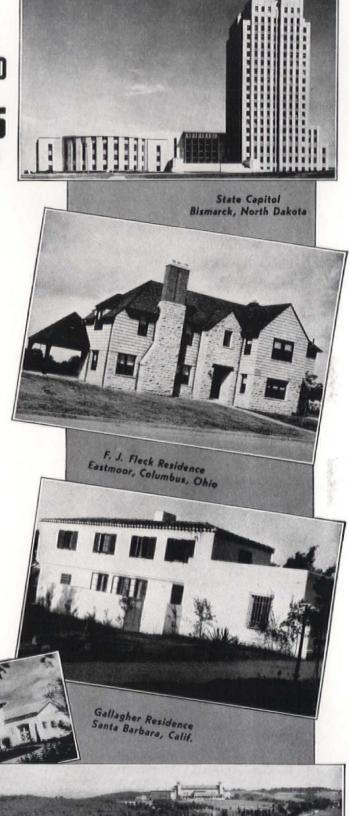
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### TO THE ARCHITECT



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1937 will see more air conditioning systems in operation than ever before. More of the better systems, too, for a larger number will utilize the

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### MEN AND DEEDS

(Continued from page 84)

Harry Hopkins to the quip: "You go on up, I'll wait downstairs and have a beer." The FHA turned to the encouragement of rental projects (June), and there was the furious

intramural war among New Dealers about the proper function of the Government in housing. Ickes obscured it by insisting on relief labor; Wagner obscured it by not understanding that slum clearance and low-rent housing were not two sides to the same question; Tugwell obscured it by dreaming too expensively for public consumption; President Roosevelt obscured it by letting the fight drag out. By the end of the year they had united to produce a \$7.50 room at Techwood in Georgia (Aug. '36). Disappointing as



**Architect Kastner** 

housing, it was important as a milestone. It established for the first time in the U.S. the principle, long recognized abroad, that the Government has a duty in housing. The

advance, unnoticed, was in-

calculable.

Thos. D. McAvoy

Administrator Tugwell

"Chip" Roberts retired from the Procurement Division of the Treasury, and later his wife gave a party for St. John the Baptist, her horse, which she decorated with a wreath of white carnations (Apr.). FHA's Frederick Babcock developed the theory of riskrating mortgages according to a nation-wide pattern. Jacob Baker took a leave of absence from the WPA to study cooperatives in Europe (Aug. '36).

Harold Ickes paused in the middle of one of his feuds to characterize Gov. Eugene Talmadge as "His Chain-Gang Majesty." Catherine Bauer won a Guggenheim Scholarship and went abroad to study housing in Paris and Sweden (Apr.). And Miles Colean, Assistant Administrator of the

FHA, produced some of the most significant literature of the year in his Technical Bulletin No. 2, a seventeen-page booklet of admirable clarity and precise style which gave the lie to nine bankers out of ten by insisting that modern architecture is here to stay, and was a good mortgage risk in the measure that it was also good architecture. The bankers continue to deny mortgages to modern.

Even the crustiest banker,

Thos. D. McAron

FHA's Colean however, was ready to admit

that the FHA's popularization of the 20-year, amortized mortgage was without quibble Building's biggest and best stride for the year. By keeping the subdivider with his property, it afforded the public its surest guarantee of quality and the industry its sharpest spur to further integration.

(Continued on page 90)

# The Insulite wall of

## PROTECTION

GIVES DOUBLE INSULATION





### Bildrite SHEATHING on the outside

(AN INSULITE PRODUCT)

The homes you design can be built faster and better if you specify Bildrite Sheathing. Its great bracing strength assures stronger walls - its 25/32 inch thickness in large panels builds wind-proof walls. Only Bildrite Sheathing combines all these important advantages:

- 1. Four times the bracing strength of horizontal eight inch shiplap.
- 2. Far more insulation than lumber.
- 3. No open joints or knotholes.
- 4. Thoroughly waterproofed by a patented integral asphalt treatment.
  - 5. Lower application costs.
  - 6. One solid piece-No laminated courses to split.
  - 7. Moderately priced.

### TILE AND PLANK inside the framework

(AN INSULITE PRODUCT)

For beautiful interiors. Speeds up construction. Two colors to select from: Ins-Light, a light color; Graylite, a rich gray brown. Two surface textures -fine screen and burlap. Insulite Tile and Plank provide the modern soft wall finish. Consider these important advantages:

- 1. Reduces the passage of sound through walls and ceilings.
- 2. Permanent decoration.
- 3. High insulation value.
- 4. Adds to property value.
- 5. The cost is surprisingly low.



DEPARTMENT AF66, BUILDERS EXCHANGE BUILDING . MINNEAPOLIS, MINNESOTA

IN ADVERTISEMENTS TO PROSPECTIVE BUILDERS WE SAY "IT WILL PAY YOU TO SEE AN ARCHITECT WHEN YOU BUILD OR REMODEL"

PROTECTED BY

TERMILITE PROCESS

Insulite products are treated against ter-mites, rot and fungi. Her "Specifications" On Wall Coverings



THEY WANT PRACTICAL FEATURES

• A recent survey brought us information of vital interest to ourselves—and to architects. It shows a definite trend toward practical features in the selection of wall coverings. What do women want? Here's what they told us:

CRACK-PROOF WALLS — More women commented on the ability of Wall-Tex to prevent cracks than on any other feature. Wall-Tex is a strong, durable canvas that strengthens plaster. The patterned numbers—and the lining cloth and stiffened canvas which are ideal foundations for painting—all provide this needed protection against cracks. Why let ugly cracks spoil the architectural beauty you so carefully plan for interiors?

TRUE WASHABILITY — This Wall-Tex feature never fails to win the enthusiasm of women. Here is the kind of washability architects can recommend with absolute safety. No comebacks later! Some users wash Wall-Tex every month—and have done it for years. The colors are non-fading. No harm from soap and water. No harm from the sun.

These practical Wall-Tex features provide what every woman wants in wall coverings—enduring beauty of the distinctive patterns she selects. There are nearly 200 appealing designs in the Wall-Tex line—for every room, for buildings of all types. Wall-Tex saves money—gives long service—less frequent redecoration is required. For homes, apartments—every type of building—Wall-Tex is a profitable investment.

For full information consult Sweets Architectural Catalog 15/48. Or write for A.I.A. File Folder, including Wall-Tex swatches. Address Architectural Dept., Attention L. Lalendorf.

COLUMBUS COATED FABRICS CORPORATION COLUMBUS, OHIO



MEN AND DEEDS

(Continued from page 88)

FHA's record grew to \$50,000,000 worth of insurance every month.

Also worthy of more than passing note was the growing popularity of the rental subsidy. Introduced originally in its present form at Leeds, England, it stood last month in highest Housing favor. And last month the HOLC, having closed its lending branch after assuming three billion dollars' worth of the country's poorest debts, was being viewed with alarm by the more partisan blocs of the popular Press.

#### BUILDINGS

In August, 1935, Depression and Recovery, ebb and flood, met and locked in a trance, and in St. Louis an architect named Henri Rush observed the anomalous nature of the moment correctly by announcing his plan for a Universum Building; it was to be 195 stories high, thus assuring both work for St. Louis' unemployed and unemployment for St. Louis' property owners. Shortly thereafter Messrs. Perry, Shaw and Hepburn finished their restoration of Williamsburg for the Rockefellers, and the slick-paper magazines

referred to the Remembrance of Things Past and everybody felt on more familiar ground, breathing easily again. To set everybody finally to rights, along came the new Saratoga Spa buildings, by Architects Freedlander, Baum, and Reynolds (Aug. '35), and a church in Pittsburgh, by Architect Ralph Adams Cram, medieval as ever.

The Rockefeller millions continued to make news steadily through the year. First it was the completion of the International Building of the Radio City group in Manhattan. The work of Reinhard, Hofmeister, Hood & Fouilhoux, Corbett, Harrison,



Rush's Universum

and MacMurray, it represented the first and biggest skyscraper of the year (May). After an absence of nearly five years the Rockefellers also took this year to subdividing, announcing plans for the erection of six new houses on their famed Forest Hills property in Cleveland (June). Back East at Pocantico Hills, Junior also began construction on a twostory red brick building for himself. And the office of J. André



Frank Jone

Oregon's Capitol

Fouilhoux announced the plans for an apartment building for the Rockefellers just four blocks uptown from Radio City (Nov.). Completed this month, the apartment

(Continued on page 92)

# A brief glance backward ...a longer look ahead

Air Conditioning has progressed this year, but Delco-Frigidaire sees vastly greater acceptance in 1937

WE HAVE reached what is still thought of by many as "the end of the air conditioning season" (a few words about this later). During this year air conditioning has attained a favor with the public which has given it great impetus. However, there still exists a considerable confusion in the minds of laymen as to what air conditioning is, what it can accomplish and what it costs.

In our first advertisement addressed to architects this year, we stated certain basic facts about air conditioning in terms which your clients would readily understand. We pointed out that air conditioning, from its most important aspect, is fundamentally cooling and dehumidifying of air, and that the accepted method of accomplishing these fundamentals is by electric refrigeration. On every occasion that we have addressed advertising to architects we have repeated this. We have done this because we believe that truth bears repetition.

### Our theme is set, but our minds are not

During this year we have been thinking and working at air conditioning problems with more vigor than ever before. We have developed new equipment and



improved that which we already made. We approach the new year ready to offer systems which will meet every demand that may be created by any requirement of any of your clients. All are based on a mastery of basic principles.

We believe that our discoveries and our complete line will be of genuine service. It is a certainty that property owners are becoming impatient with vague claims, and with products of doubtful sponsorship. More and more the public will look to known sources for air conditioning. Accepted ability in engineering and manufacturing will be held in growing respect. This is, of course, favorable to Delco-Frigidaire, with its General Motors background and resources. It tends to simplify the task of the architect in specifying systems which are dependable in operation and reasonable in cost.

### A year 'round problem

All things considered we believe that Delco-Frigidaire can look forward to a full and busy year during which architects will find the suggestions of our engineering and research men increasingly valuable. We say "a full year." For 1936, we believe, is the last year during which air conditioning will be thought of as a purely seasonal thing. The proper control of the condition of the air within any given space is just as important in January as in July. Air conditioning, as Delco-Frigidaire conceives it, is a year 'round operation. Its problems and methods may vary with the seasons; its function is always the same.

It is our sincere hope that in the immediate future our relations with architects may be closer than ever. It is our equally sincere resolve that we shall make those relations of greater value to architects with each succeeding month.

# ACCEPTED FACTS ABOUT AIR CONDITIONING THAT POINT TO ONE CONCLUSION

- Summer air conditioning is basically cooling and dehumidifying.
- 2 The accepted method of accomplishing this is by electric refrigeration.

**CONCLUSION**—Buy air conditioning from Delco-Frigidaire—the organization representing the most experience in electric refrigeration.

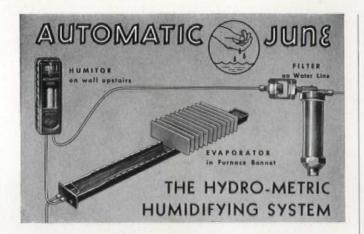
# DELCO-FRIGIDAIRE CONDITIONING CORPORATION

AUTOMATIC HEATING

**DAYTON, OHIO** 

AIR CONDITIONING

PRODUCTS OF GENERAL MOTORS



# Only AUTOMATIC JUNE completely MEETS MODERN HUMIDIFICATION REQUIREMENTS

Humidification of indoor air calls for more than a water pan with float valve or other similar device.

Automatic June is a complete re-humidifying system, perfected to meet the requirements of 1936 air conditioning. These are its superior points:

1 It provides ample humidity at all times, even in mild weather, when bonnet temperatures are low.

2 Its operation is controllable, so that there are no weeping windows in extremely cold weather.

3 Its operation is governed by outside temperatures.

4 Its very small horizontal area does not interfere with air flows inside the heating chamber.

5 It is trouble-free. The evaporating plates can not clog with lime.

6 It is easily installed in any type of air conditioning or warm air heating plant.

Automatic June is unique, the last word in scientific humidity control.

#### SEND FOR THIS BOOK

"The Science of Re-Humidifying Indoor Air" tells an interesting story to every heating contractor, architect and builder - clearly, briefly and comprehensively. It is a revelation to everyone who reads it. Send for your copy today.

### MONMOUTH PRODUCTS CO.

209 E. 131st STREET

#### MEN AND DEEDS

(Continued from page 90)

displayed bay-window dining alcoves, community playrooms. Same time the Rockefellers announced one more apartment.

Prosperity note of the season was the architects who built newsworthy homes for themselves. The pick of this

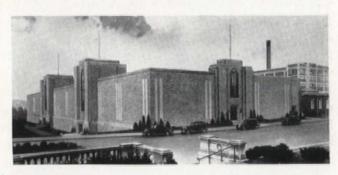


Architect Lescaze

lot were the Manhattan houses of Lescaze and of Sanders. one street apart and looking very much like each other in brick and glass brick fronts, each sporting oversize metal name plate bearing with chaste restraint nothing but the owner's name followed by the single word "Architect." On the west coast, in California, Richard J. Neutra built an experimental house.

In Manhattan the Kress chain stores chose the site of

the famed old Wendel house on Fifth Avenue to build a department store-warehouse practically without windows, completely air conditioned, and excellently lighted. In Pennsylvania the Hershev Chocolate Company comforted the workers in its completely windowless factory by installing red, white, and green signs to indicate to them the condition of the weather outside. And in Chicago the Chicago Vitreous Enamel Company achieved the top in sanita-



Hershey Factory

tion plus publicity by doing its entire office in enamel. But Architect Harrie Lindeberg drew up designs for the U.S. Embassy in Moscow in fine American Colonial, and no tricks.

Government architecture turned out very well, considering the way Government architecture usually turns out. Techwood, the low-rent project in Atlanta, was severe and per-

haps over-conscientious about the use of brick. But the designs by Alfred Kastner for the houses at Hightstown, N. J., under the Resettlement wing, were very pleasing and straightforward. Berwyn's first facades were severe, and Greendale, a greenbelt project in Wisconsin, introduced the Government's first efforts at large-scale housing in one-family houses, and showed houses without basements, the heating plant being placed on the ground floor. Architect Cass Gilbert's Supreme Court build- Analyst Wenzlick



Arthur Witman

(Continued on page 94)



SAVES MONEY!
Because it greatly
reduces dead weight
loss, not only of floor
areas but of supporting
structural steel as well,
the Robertson Floor effects substantial savings
in total building cost by
permitting lighter steel
construction.

100% ELECTRICAL A-VAILABILITY! In office buildings, the Robertson Floor provides facilities for the easy utilization of every electrical device the future may bring. Every cell of the Floor is a protected wire race-way of generous capacity.

THAT'S speed! And speed means money earned and money saved in money earned and money saved in today's building construction. Actual performances like this provide one reason why the new Robertson Steel Floor Sys-tem has been so enthusiastically received by men who are building new structures

or modernizing old ones.

Two workmen can lay Robertson Steel Floor sections easily. The sections are light, quickly handled and speedily installed. No floor forms. No temporary planking. No delays. Four hours after floor crews begin to lay Robertson Floors, it has been proved by experience that other trades can begin work on them, can stack materials on them safely and con-veniently. Result? Quicker completion of the job. Quicker occupancy. No inter-ruption of regular operations during modernization. Money saved, all around.

Speed is only one advantage of the Robertson Floor. It has many others of equal importance. Greater strength and less weight than ordinary floors. Reduction of cost of supporting structural steel. Greatly reduced fire and accident hazard. 100% electrical availability... which means that it fits the buildings you design to face the future, by providing comprehensive facilities for every pos-

comprehensive facilities for every possible electrical development.

Our brochure "New Life for Buildings" and our special technical bulletin give you complete information about the Robertson Steel Floor System. Send for them. They're free. Whatever type of building you're designing, you'll want to know about this revolutionary building know about this revolutionary building development. Address H. H. Robertson Company, 2004 Grant Building, Pittsburgh, Pennsylvania.

ROBERTSON



# TIDEWATER RED CYPRESS

 As an architect, naturally, you are familiar with the uncompromising durability of Tidewater Red Cypress. You know that this decay-defying wood will give generations of service when used for siding, shingles, door and window frames, porches, steps and other exposed portions of the home -that wherever wood meets weather this cypress will serve best and last longest.

You've found, too, that its picturesque grain, rich coloring and versatility of treatment permit you to create unique interior effects of real distinction and unequalled charm.

When you include cypress in your building plans you want it to be furnished precisely as you specify it. Exact not only as to species, but as to seasoning and grade. Because every board or bundle is trade and grade-marked, you can be certain your specifications calling for Arrow Brand Tidewater Red Cypress will be filled "to the letter". This trade and grade-mark is your guarantee that the lumber is Genuine Tidewater Red Cypress, "The Wood Eternal". It proclaims, too, that the mill producing it is a member of the Southern Cypress Manufacturers' Association-an assurance of proper seasoning, careful manufacture and official grading.

Regardless of the nature of the items you require, or the quantity, you can rely upon prompt service when you specify Arrow Brand Tidewater Red Cypress. The Florida Louisiana Red Cypress Company handles the entire cypress output of five outstanding manufacturers and maintains sales offices and distributing warehouses in many states, with retail dealer outlets everywhere.

"If it's Arrow Brand, it's the Wood Eternal"

FLORIDA LOUISIANA RED CYPRESS CO. Barnett National Bank Bldg. Jacksonville, Fla.

#### MEN AND DEEDS

(Continued from page 92)

ing in Washington was exhaustively examined by everybody at the time of its opening (Oct.), and was chiefly remarkable for whimsy in the frieze and terrible acoustics. Easily the unhappiest and among the best Government-financed



Labor's Green

work both appeared in Manhattan, where the local Housing Authority combined the worst features of remodeling and rebuilding, in a block of impressively costly tenements which were opened to the public with cries of defiance by Langdon W. Post and Mayor Fiorello H. LaGuardia (June). Commissioner of Parks Robert Moses, together with Architect Aymar Embury, II, did a memorable job with their share of the public's cash. First they revamped the Cen-

tral Park Zoo with a gentle and understanding hand, turning it overnight into the public's favorite playspot. Then they built a series of public swimming pools, two of which hold over 5,000 people at once. This figure was

altogether beyond the imagination of New Yorkers, and they flocked in gawking thousands to discover immense plants usually consisting of a swimming, a wading, and a diving pool, great stretches of stone bleachers, and simple lines featuring glass brick set in red brick. Not content with these miracles, the indefatigable Mr. Moses also brought the Triborough Bridge to completion (July), fired the ultra-smart Casino out of Central Park, and won many a running fight, including one Commissioner Moses with Secretary Ickes.



In a year when corporate issues began once again to make Financial news, it was only natural that factories should once again make Building news. General Motors celebrated a bumper year with the announcement of a mammoth new plant to be erected in the Jersey meadows. And out in Detroit Henry Ford produced a fine contradiction by decentralizing his factory labor in subsistence homestead and factory units similar to those recommended by the Resettlement Administration. Indoors, Designer Norman Bel Geddes produced the most architectural scene since Belasco died with his version of the background for "Dead End."

#### REMODELING

It was smart to remodel as far back as 1933, but last year saw remodeling arrive at its maturity, with a technique, a vocabulary, and a literature all its own. Liquor stores, stockin-trade of the early remodeling days, gave way to drygoods stores and theaters as the leaders in the field. In New York it was Pruitt and Brown who did over a Fifth Avenue corner for Mark Cross. In Chicago it was Pereira & Pereira who remodeled whole strings of theaters for Balaban & Katz. Holabird & Root took their try at revamping railroad cars. Chain concerns of every description-Longchamps Restaurants, Pennsylvania Drug stores, A. & P. groceries-all took it up.

(Continued on page 100)



# THERE ARE SIGNIFICANT NEW ACHIEVEMENTS IN COMFORT ENGINEERING •

- While architects across the country were giving modern treatment to the 1936 skyline the Kelvinator organization has been making notable developments in the modernization of the "climate" within the buildings.
- This progress has advanced far beyond the perfection of equipment that automatically conditions the air in homes and small and large business buildings.
- It has advanced through the experimental stages in application. It has culminated in a tried-and-proved science of comfort engineering that embraces the human and the economic factors as well as the physical considerations in air conditioning.
- Every advantage of Kelvinator's development work and experience is being made conveniently available to architects to aid them in serving their clients soundly and profitably on air conditioning problems.
- Watch for further details of Kelvinator's architectural co-operative service to be announced in November. Kelvinator Corporation, Detroit, Michigan.



A TIMELY

on a modern

SPIRE

The spire of the Williamsburg Savings Bank towers high over Brooklyn. And near the top is the largest four-dial, gastube-illuminated tower clock in the world. Of course it is a Telechron! At night, the hands are lighted by gas tubes. So it looms large both day and night,—a practical symbol of architectural and engineering skill.

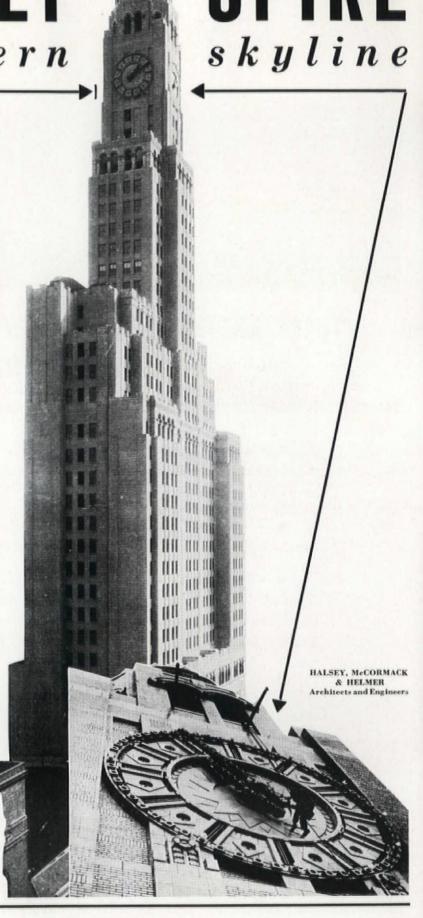
In the banking quarters below, other Telechron electric clocks keep accurate, efficient time. The experience of the Warren Telechron Company in the field of built-in time covers installations of all types. The number of clocks in a Telechron system may vary from one to thousands—all controlled from a central point.

Architects are specifying Telechron systems for all types of buildings, both new and modernized. The first cost of a Telechron system is surprisingly low. Operating and maintenance charges have proved to be negligible.

At your request, we would be pleased to send more detailed information. Or one of our representatives to discuss your projects with you. Address the Warren Telechron Company, 711 Main Street, Ashland, Massachusetts.

Telechron
(Reg. U. S. Pat. Off, by Warren Telechron Co.)

self-starting synchronous electric clocks



# Briggs Beautyware

# DEFINITELY OUTMODES ALL OTHER PLUMBING FIXTURES



Briggs Beautyware — smartly styled, more enduring, moderately priced, with less weight and greater strength and beauty—definitely outmodes all other plumbing fixtures. Its exclusive two-tone color combinations, its design and construction, provide both a style and sanitary appeal which are keyed to the progress of the building industry.



50-inch Combination Cabinet Sink and Tray in the Ivory and Sea Green twotone color combination.



Strikingly beautiful lavatory in solid blue with chrome legs. Other colors available to suit decorative plans.

Briggs Beautyware is available in snowy white or exquisite pastel color shades. Its features widen the architect's scope of creative planning. They also assure a type of installation that meets the individual requirements of homes, apartments, office and factory buildings, hotels, restaurants and public institutions.

PLUMBING WARE DIVISION
Briggs Mfg. Co. • Detroit, Michigan
New York: 101 Park Avenue ©1998
Chicago: 177 N. Mich. Blvd.



Above — Cabinet Lavatory in two-tone green, Left—60-inch roll-rim sink in Lime Green.



# Briggs Beautyware

# A TRUE EXPRESSION OF FUNCTIONAL DESIGN



5-foot recessed tub without seat for tiling in.
Modern design and beautiful colors make
Beautyware the ideal tub—moderately priced.

Briggs Beautyware establishes an entirely new trend in plumbing fixtures. It provides a greater utility of both space and units. The high-lustre, acid-resisting porcelain enamel finish is easier to keep clean. The soft, rich pastel shades and two-tone color combinations create a cheery, pleasing atmosphere in bathroom, kitchen and service room. Material, design and method of construction all assure a lifetime of efficient, practical use.



Butter yellow and black two-tone color combination — a Beautyware bathtub with safety seat.



Wing-bracket lavatory shown in snowy white enamel. This popular slab type is also available in a wide range of beautiful colors.



Simple beauty of line and quiet operation are features of this striking, streamlined closet combination.



A product of precision engineering, Briggs Beautyware fixtures in shapes, sizes and exclusive features of design, create a new standard of accuracy. They permit a new economy in arrangement and construction of rooms. Their lighter weight reduces to a major degree the costs of handling and installation. The Briggs Department of Design and Color will be most happy to cooperate with architects in planning distinctive decorative effects with Briggs Beautyware.





# **Termites**

Although termites have been widely publicized, many erroneous statements regarding their activities have been made. You prefer to design and build with lumber, and rightfully so, because it is the most livable of building materials. You are beseiged from many sides to specify substitutes, but before doing so you should know that it is neither difficult nor expensive to protect wooden structures against termites and decay.

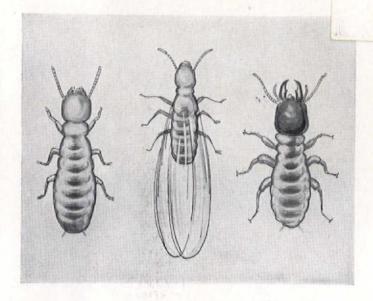
WHAT TERMITES ARE. Sometimes called "white ants," they are not ants at all but belong to the roach family. The reproductives may be seen swarming in the Spring and late Summer, but the workers, which are the destroyers, never leave their tunnels. Living in vast underground colonies, their sole occupation is gnawing wood. Their base of operations is a huge nest underground, from which they bore or construct cement-like tubes to the workings in the wood above.

FEW BARRIERS STOP THEM. Masonry or concrete walls are not serious obstacles. When they cannot go through cracks, they build their tubes along the surface to the wood, they sense nearby.

Metal shields and aprons likewise are no protection. The photograph at the left shows an ordinary termite tube built around a flanged metal shield which was inserted between a cedar post and a sill. This shield was supposed to stop the termites, but with a few hours' work the insects easily circumvented it.

Metal shields do not stop termites. Here, the barrier has been circumvented by building a cement-like tube around the left hand edge. Inside this tube, there is a constant procession of termites.





 Subterranean termite types: left, the mature worker; center, the winged reproductive; right, the mature soldier.

WHAT TO DO. Wood, pressure-treated with a chemical that is toxic to termites, naturally turns them away. Such a chemical is "Wolman Salts."\* Spraying is ineffective because termites do not bore out to the surface of the wood. Pressure treatment is necessary to secure permanent and thorough penetration.

Wood treated with "Wolman Salts" preservative, known as "Wolmanized Lumber,"\* is the specific defense against termite attacks and decay. This treated lumber provides certified protection.

\*Reg. U.S. Pat. Off.

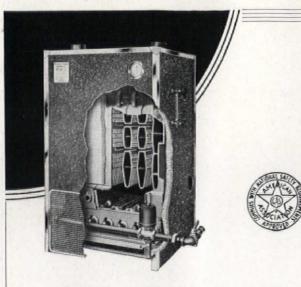
**LOW COST PROTECTION.** The cost of using "Wolmanized Lumber" for substructure, and low sheathing and siding to provide the essential protection against termites and decay is less than 1% of the total investment. And the first cost is the last.

HOW WE SERVE. We do not sell treated lumber direct. Our service to the lumber and building industries is merely to render lumber permanently termite- and decay-proof. We have treating plants, from coast to coast, located near sources of supply. You can order from your lumber dealer any kind or amount of "Wolmanized Lumber" you want.

For more complete data on wood preservation, let us send you the booklet, "Build to Endure."

Address American Lumber & Treating Company, 37 West Van Buren Street, Chicago, Ill.





# After all **Gas Is The Truly Automatic Heat**

#### Here's A Surprising Fact **About The Burnham**

May have mentioned it to you before. But it is so almost unbelievable it may be that you voluntarily promptly got busy forgetting it. Before reading further, be assured that if the facts were not so, we would have a swarm of hornets around our head, and hornets have a nasty sting.

So here are the facts.

Factory boiler tests are one thing. What a boiler actually does on the firing line is quite another. If then a boiler in actual service can make a showing equal to the factory test, which admittedly was made under favorable conditions, wouldn't you say it's a gas boiler that is something more than "just another boiler"?

That's exactly the performance this Burnham Gas Boiler has to its credit. The way it is cutting down gas consumption, looks like we found out how to make a gas boiler worth your looking into. Costs no more than ones that do less. Want a Catalog?

# Burnham Boiler Corporation

Irvington, New York Zanesville, Ohio

Representatives in All Principal Cities of the United States and Canada

#### MEN AND DEEDS

(Continued from page 94)

Industrial designers held their ground nicely during the year, exhibiting a tendency to steer clear of architectural work. Henry Dreyfuss designed the Mercury, a five-car train

for the New York Central that set a new standard in travel, and was chiefly notable for its use of the open plan and the introduction of flowers —gladioli, to be precise—as a permanent architectural feature (Aug.). Gilbert Rohde designed a complete houseful of furniture in unvarnished native woods for the Kroehler Company in Chicago (July), and Teague continued to enhance his reputation as a display artist with the Ford exhibit at the San Diego Fair.



Designer Rohde

In Manhattan, Designer Rohde took advantage of the plentiful flow of WPA money to form a school of industrial design coordinating "training in esthetics, products, machine fabrication and merchandising," and, he claimed, modeled after the famed Bauhaus. Tuition was free and limited to

200 students, with Designer Rohde himself teaching design (Dec.). The school's enrollment was 75 per cent oversubscribed before the opening. Later in the year the first group ever to graduate from an American university with an A.B. in Industrial Design emerged from the Carnegie Institute of Technology, five strong (June). The school was conducted under Professors Dohner and Kostellow, and consisted of a two-year extension to a two-year course in Fine Arts. Norman Bel Geddes formed a partnership with



Designer Teague

Architect George Howe which dissolved in two days—which was not fast enough to stop people from crying, "Geddes -and Howe!

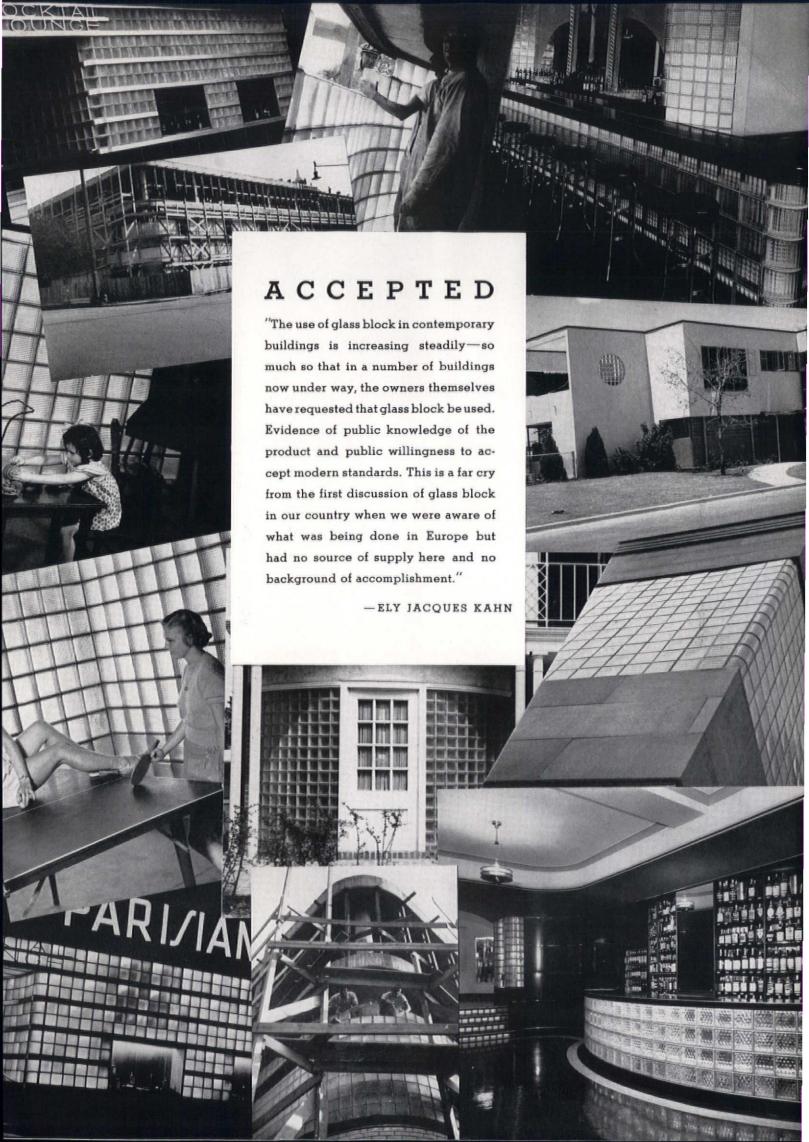
#### FAIRS

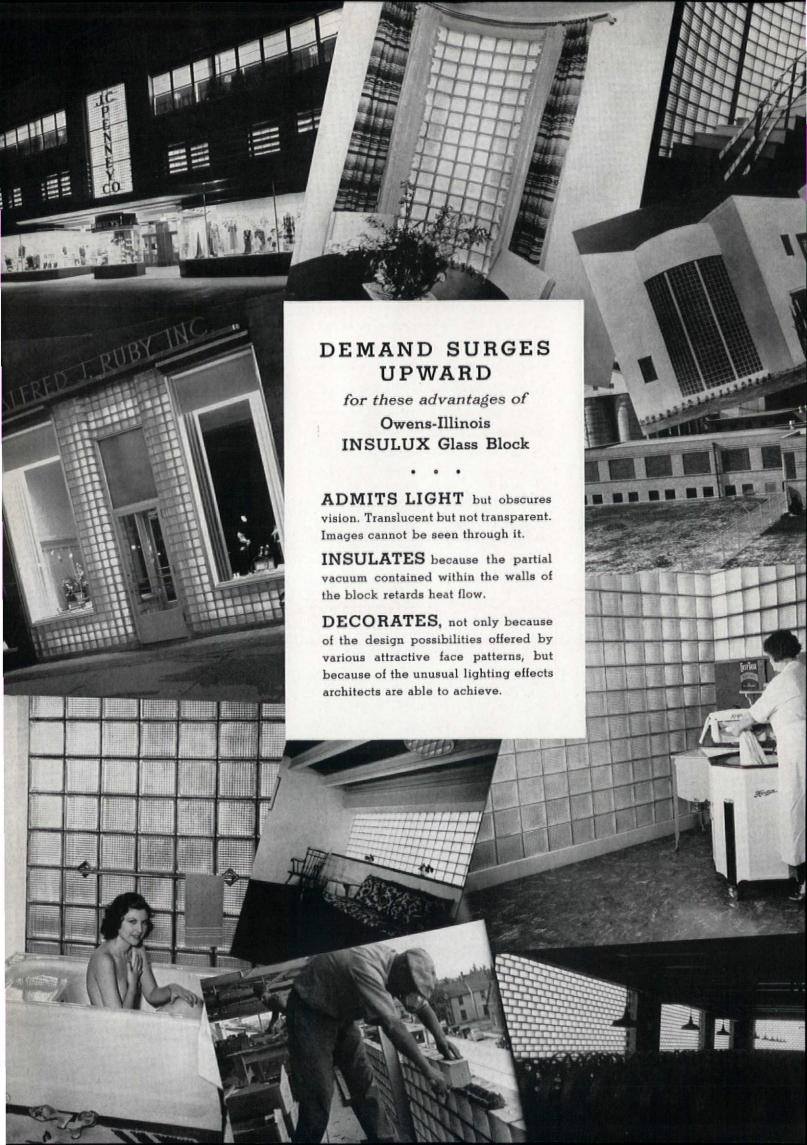
San Diego started the Fair season off with a second showing of the previous year's effort, featuring a nudist camp.

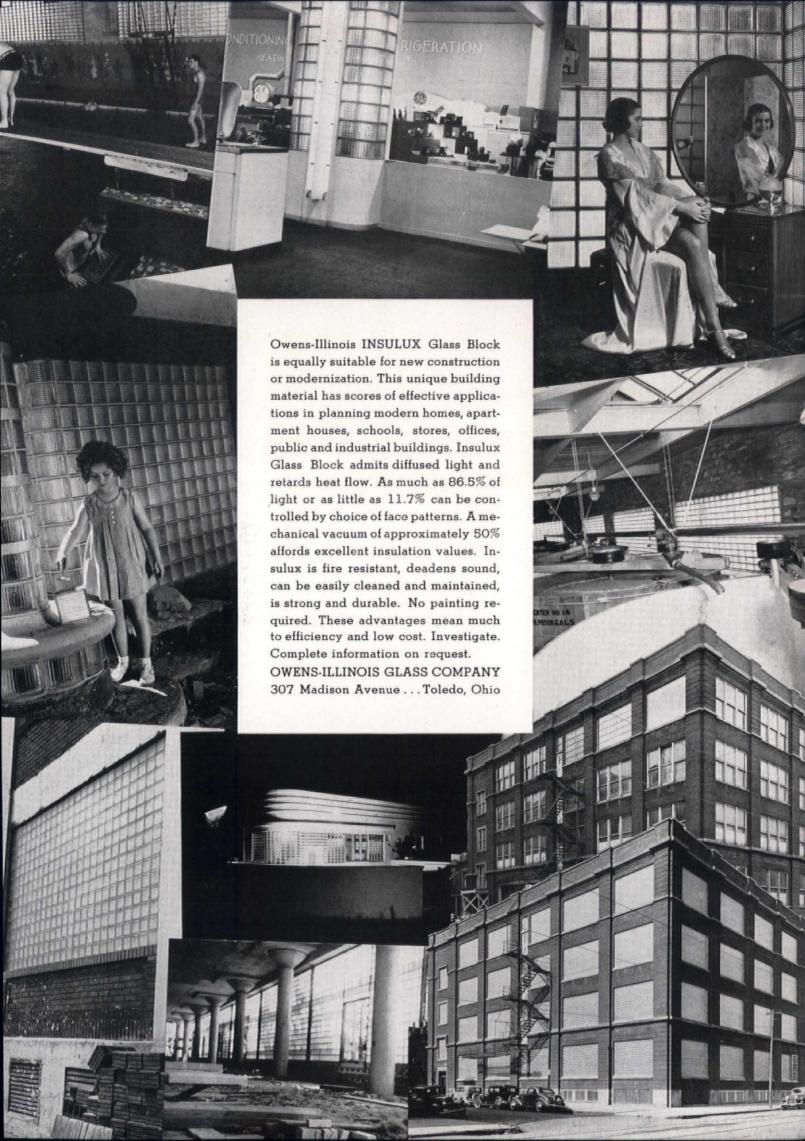
On June 6 Secretary of Commerce Daniel C. Roper said to a microphone in Dallas: "The State of Texas sends greetings . . ." Two minutes and six seconds later the message returned from a trip around the world and its electric impulse sheared a ribbon to open the Texas Centennial Exposition. The chief emphasis of the Fair was placed on Cattle, Cotton, Oil and the indigenous Texas landscape. Architect Dahl's buildings, sun-bathed walls, brilliant Texas Rose



(Continued on page 104)







### MEN AND DEEDS

(Continued from page 100)

colors, and not unpleasant miscegenation of architectural styles were nice by day, magnificent by night. The Street of All Nations promptly preempted the attendance prize and kept it. Really more authentic because it was franker in intent was the rival Fort Worth Festival, a gorgeous clambake, jamboree, and night-club presided over by Billy Rose, and executed in reds, whites, and blues by Designer Albert Johnson. The Festival was educational only to minors and its architecture was frankly adapted to amusement in the finest romantic-display style. It featured a circus, a rodeo, a musical comedy, a frontier saloon show, and Sally Rand.



Distance In

**Dallas Nightscape** 

In July the Great Lakes Exposition opened on an old dump, and displayed the conventional exhibits in a series of buildings whose chief merit was that they did not resemble those of A Century of Progress. Chief Architect Abram Garfield, a direct descendant of President James Abram

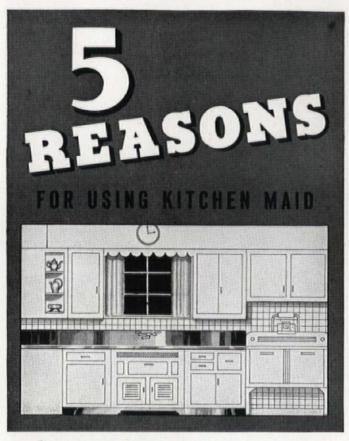
Garfield, decided to segregate the amusement district of the Fair, and thus afforded onlookers the chance to observe that fan dancers continue to outdraw chassis assemblies by better than two to one. Meanwhile plans for a New York Fair in 1939 had been launched, producing a great deal of confused speculation, an architectural committee chairmaned by Architect Stephen Voorhees. The architectural committee consists of Architects William A. Delano, Robert D. Kohn, Richmond



Architect Cret

H. Shreve, Gilmore Clark, Engineer Jay N. Downer, and Industrial Designer Walter Dorwin Teague. After an enigmatic period of silence Grover Whalen announced of the Fair: It will show not merely manufactures and merchandise, but the social consequences of these new processes and products. It will enable the [visitor] to understand the relationship and the interdependence of the various diverse elements of modern society. He will see how he might utilize the greatly increased opportunities and the marvellously developed mechanical processes of the Twentieth Century toward better living and greater human happiness. The Fair, by portraying an integrated pattern of modern life, will inspire him to an appreciation of the great possibilities which he now possesses, and of the great potentialities, both material and spiritual, of the future.

(Continued on page 106)



### 1 TIME-TESTED WOOD CONSTRUCTION

Kitchen Maid units are built to last. Sturdy 3/4" framework of poplar — properly seasoned. Mortised and tenoned joints. Rigid, plywood shelves, 5 ply, 7/16" thick, securely dadoed. Presdwood backs add strength and seal each unit.

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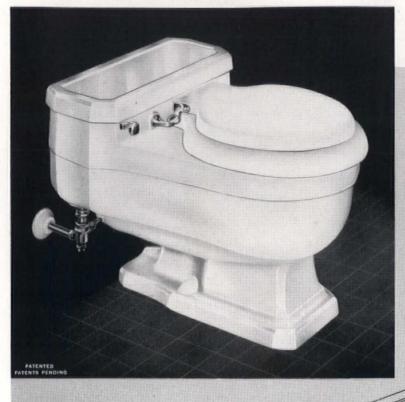
For instance, inside corners rounded for easy cleaning...metal drawers on hardwood guides for easy action...warm, resilient Temperprest work tops in 5 colors...efficient hardware.

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"New Day" planning-as never before-demands the very maximum in efficiency and space-economy. Qualities for which the Kinnear Steel Rolling Door has long been famous! And the same UPWARD-ACTING principle that so many years ago established them as the leader in door efficiency has been incorporated today in the many other types of Kinnear Doors. Providing proved advantages in doors perfectly adapted to every modern building need. Fire or service doors that open UPWARD quickly, easily and conveniently the year around. Clearing ice, snow and ground obstructions. Out of the way, requiring no useful floor or wall space. Weather-tight and burglarproof. And of designs, materials and finishes that harmonize with any architectural treatment. So when you come to the subject of doors remember that the word "Kinnear" in your specifications is your one assurance of designing cooperation, quality and ultimate owner satisfaction that has been possible only through Kinnear's 40 years of door specialization. Let us work with you.



Columbus, Ohio

#### MEN AND DEEDS

(Continued from page 104)

#### NAMES

And the year was a great one for names, names that made news in a miscellaneous and uncorrelated fashion, typical somehow of the general indecision of the times. Paul Cret won the competition for a new



Banker Fleming

hees, Robert V. Fleming, Walter W. Rose, and LeGrand Pellett were elected to the presidencies of the A.I.A., A.B.A., and the N.A.R.E.B., and the U.S. Building & Loan League.

Federal Reserve Building in Washington (June), and Trowbridge, Livingston, and

Francis Keally won one for a State Capitol in Oregon

(June). And Stephen Voor-

Reynolds Corp.'s Richard S. Reynolds gave a cafeteriastyle dinner at which was dis-

cussed the sales value of "Moon Over Miami" both for Miami and for any place except Miami (Apr.). Pope Pius,

from Castel Gondolfo, deplored the use of Modern architecture in ecclesiastical buildings (Sept.), and Dictator Mussolini ruled Modern the official architecture of Fascism. Senator Couzens gave half-a-million dollars toward a low-rent project in Pontiac, Mich. (Sept.), and Aircraftsman W. E. Boeing began subdividing out in California (Dec.). The Levitt Brothers of Long Island tied for best merchandising trick of the year with W. Burke Harmon, also of Long Island. The former featured a letter from Owen



Realtor Bose

D. Young in advertising a subdivision, and the latter got A.I.A. indorsement for a book featuring fifteen of his own

houses. President Alfred P. Sloan of General Motors diagnosed Recovery with his eye on the Building Industry, and out in California Banker Amadeo H. Giannini publicly thanked God and the New Deal for the FHA. Architects Le Corbusier and Sir Raymond Unwin paid calls on the U.S. as did the President of the R.I.B.A., Perry Thomas. The circulation of the American Home touched a million.



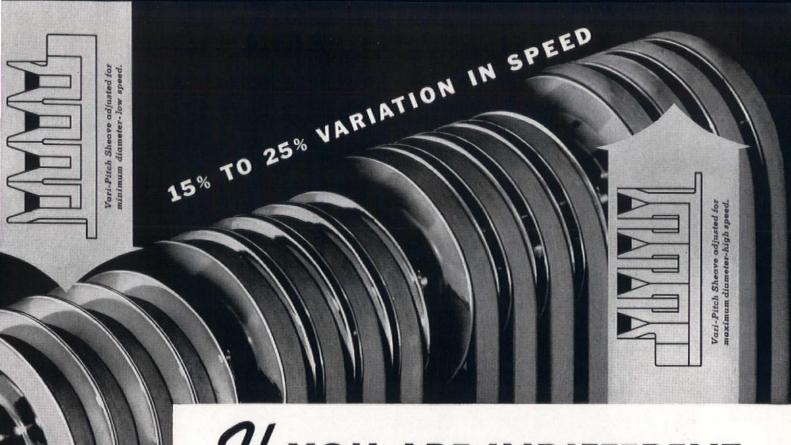
B. & L.'s Pellett

Architects Gilbert C. Hall of Chicago and C. Howard

Crane of Detroit snared the contract for a six-and-a-quarter-million dollar amusement center in London in the face of "Buy British" (Dec.), and back in this country thousands booed the name of Huey P. Long, recently assassinated, as a bridge named after him was opened in his native State. University of California Trustee Herbert C. Hoover chuffed into court to plead that his college be allowed to invest in realty bonds on the grounds that they were a better invest-

(Continued on page 108)

1640-60 Fields Ave.



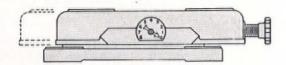
# YOU ARE INDIFFERENT to efficiency... then this page will not interest you

Competition is such today, that profits, in most cases, depend on the difference between approximate efficiency and high efficiency.

It is this fact that makes the new Vari-Pitch Sheave, for Texrope V-Belt Drives, of the most vital importance in the power transmission field. By a simple adjustment that takes but a moment, the diameter of the Vari-Pitch Sheave may be altered to a degree which will give a variation in speed from 15 to 25% per sheave. That means that you can experiment through a long range of fractionally increased or decreased diameters to ascertain at just what speed your machinery shows the highest possible efficiency; it also means that you can make different products on the same machine. some of which may require higher speed and some lower-and all this can be done

without dismantling and buying new drives, but simply by taking a few moments to make the desired adjustment.

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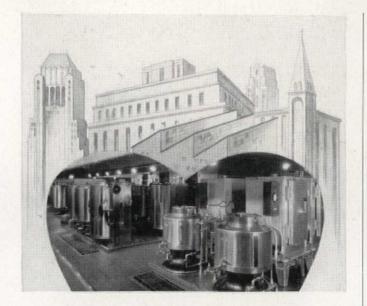
Write for Vari-Pitch Bulletin No. 1261

Belts by Goodrich

# ALLIS CHALMERS

#### MEN AND DEEDS

(Continued from page 106)



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You Will Usually Find • •

# JOHN VAN RANGE Food Service Equipment

Designed and erected to meet the most modern demands for beauty and efficiency, such typical office buildings, manufacturing plants, and institutions as the

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Boston City HospitalBoston
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were planned by architects who recognized that one of the most vital departments having to do with personnel is that which is concerned with the preparation and serving of foods in attractive and appetizing surroundings.

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**EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD** 

328 EGGLESTON AVE.

CINCINNATI, OHIO

ment than Governments (Mar.), and in Ohio a Circuit Court of Appeals upheld a decision that the PWA had not the right to condemn land for slum clearance, Judge Florence Allen eloquently dissenting (July, '35).

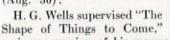


International News
Reynolds' Reynolds

Mme. Paul Cuttoli displayed to delighted New Yorkers tapestries designed by the cream of modern French painters, including Picasso, Dufy, and Matisse (Apr.), while the name of Wrigley became part and parcel of a million lives when it picked out in bulbs the world's largest illuminated electric sign atop a taxpayer on Times Square (Apr.). Architect Thomas Hastings, of Carrere and Hastings, was revealed by his widow to have left a fund for the remodeling of the facade of the New York Public Library (June), and Elsie de

Wolfe, otherwise Lady Mendl, put interior decoration back in the news by getting the contract to redecorate King Edward's Buckingham Palace. The style: Modern (Aug. '36).

Corwin Willson celebrated the trailer with a book about "Mobile Housing" (June), and more than a quarter-ofa-million people traveled up and down the land in them. Carl Milles finished an Indian God of Peace in onvx for St. Paul (June), and Mr. and Mrs. Doris Duke Cromwell sulked in public when the local authorities of Hawaii forbade them to erect a half million dollar swimming pool on the public beach because it was disturbing to the poor (Aug. '36).



a cinema version of his manuscript which revealed tubular glass and planes of steel in some of the fanciest architectural

**Sculptor Milles** 

Wells' World

dreams ever conceived. Alan Hoover performed a filial duty by buying up the birthplace of his father, Herbert, in West Branch, Iowa (Oct.). Marcel Duchamp, bad boy of painting and creator of Nude Descending a Staircase, traveled to the U.S. to see Hollywood, and observed: "Professionalism is the death of Art," the first piece of genuine esthetics to be enunciated since the onset of the Depression (Aug. '36).

Underwood & Underwood

J. André Fouilhoux won the A.I.A.'s small house competition in Manhattan (July '35)

and John Gaw Meem finished the Colorado Art Center

(Continued on page 110)

# Successful Air Conditioning Requires INTELLIGENT TEMPERATURE CONTROL

The introduction of the "preheater" principle in thermostat design has done much to increase indoor comfort in the winter time. But this type of instru-

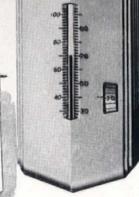
ment must unquestionably be able to hold a level temperature indoors regardless of the weather. Even in the teeth of a blizzard with the mercury dropping rapidly no sag in the indoor temperature curve can be tolerated.

Furthermore the styling of the thermostat should be compatible with modern interiors-furnish a pleasing touch without being conspicuous.

The "Genuine Detroit" Two-Eleven Room Thermostat is meeting these requirements because it incorporates a new principle of compensation.



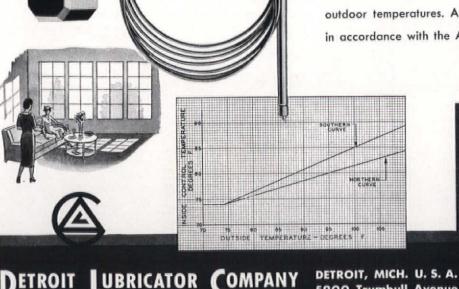
ful. And it needn't exist for one minute.



SUMMER

Overcooling in the summer time is the most serious indictment of summer air conditioning. It is not only uncomfortable but a hazard to health and extremely waste-

The "Genuine Detroit" 691 Differential Thermostat automatically holds indoor temperatures in a specified relationship with outdoor temperatures. And the actual difference is precisely in accordance with the ASHVE "Comfort Curve".



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# RAILWAY EXPRESS

NATION-WIDE RAIL-AIR SERVICE

#### MEN AND DEEDS

(Continued from page 108)

(June). Dean Hudnut moved from the Columbia School of Architecture to Harvard (July '35), and Ernst Kahn came over from Germany to teach the U.S. how to set up the financing of its low-rent Government-financed housing. But



**Trustee Hoover** 

scarcely anybody in Washington paid him heed, and shortly he left for Palestine. On Long Island, young Socialite Stewart Iglehart erected the first house on the world's most exclusive subdivision: it was conceived to assure desirable neighbors. In the personal columns of the Philadelphia Evening Bulletin there appeared an advertisement reading "Plan wanted for bungalow, size 14 x 22, for Florida Keys, strong enough, if possible, to withstand tidal wave." (Nov.).

The Architectural League celebrated its Golden Anniversary with a retrospective exhibit of fifty years of architecture and interior decoration which got its greatest claim to fame through the unmerciful roasting that was accorded it by

Critic Lewis Mumford (Mar.). The Modern Museum of Art held an exhibit of historic Fair buildings, and one on the modern movement in art which was as nearly definitive as any ever seen in this country (Mar. & Apr.). For its part, the Federal Government held a series of Better Housing shows which featured Talking Towers, mobile displays speaking in the hollow, unconvincing accents of radioratory. The Bonus was finally passed in February and

was promptly followed-with the trite patness of Biblical retribution-by record floods. Some of the Bonus but not much of the flood-funds went for building in spite of the fact that Pittsburgh Golden Triangle soaked in eighteen feet of

water, and many slums were demolished overnight.

Architect Fouilhoux



Keystone View

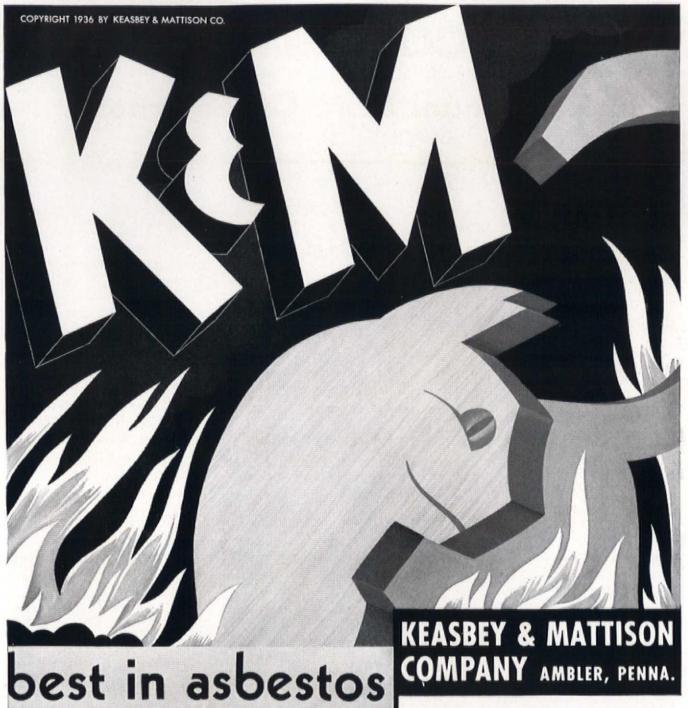
Realtor Boeing

In the Bronx a new apartment house crumbled and crashed, killing eighteen, very soon after it was topped out (July), while in Miami a fine new residence hotel of 400 rooms was completed from plans to occupants, in 70 days. And in New York an apartment building was completed, but, lacking permission from the local authorities, could not open for occupancy. Death came often and in

high places: To Werner Hegeman, city planner (Apr.); to

Henry Wright, architect (July); to Fred F. French, realtor (Aug. '36); to Albert Farwell Bemis, technician; to M. J. Van Sweringen, capitalist (Dec.); to Edgar Chambless, lifelong crusader for the lost cause of the ribbon development of cities (May).





A line of Asbestos and Magnesia Products of exceptional architectural value is the result of Keasbey & Mattison Company's long experience in working with the profession. The K & M line is complete . . . specialized for every requirement . . . backed by more than 60 years of pioneering in the development of insulation and building products for every purpose.

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# In Residential Floor Construction

# Modern Shrink-Proof Floors for Residences . . .

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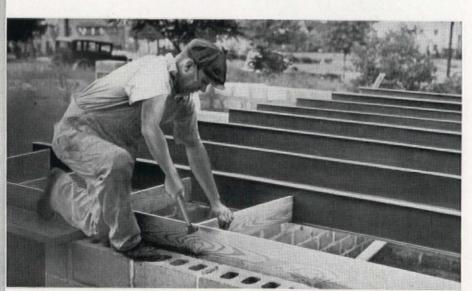
J&L Junior Beam floors have gained wide acceptance among architects, builders, and home owners everywhere. They have been installed in more than 5000 homes in all sections of the country.

The J&L Junior Beam floor for residences is universally adaptable and can be used in any type or size of home without imposing any restriction on either the architect or builder.

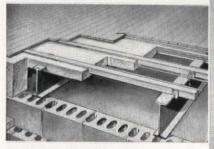
For complete information on J&L Junior Beams, see Sweet's Catalog, or send for a free copy of the interesting bulletin-J&L Junior Beam Floors for Residences.

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- 1. 100% Termite-Proof
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Photograph taken during the installation of a J & L Junior Beam floor in a modern residence. Note simplicity of concrete form construction.



Section view of Junior Beam floor construction

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# J&L Junior Beams

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Due to their light weight and ease of fabrication and erection, J & L Junior Beams are widely used as secondary members in floor and roof construction in practically all types of buildings. They are also being used in increasing quantities in many classes of structural work where due to their light weight they are the most economical sections to be used.

When used in floor construction in light occupancy buildings, J & L Junior Beams offer the architect and contractor these important advantages:

1. Unusual economy due to reduced

dead weight of floors and consequent saving in main frame and foundations.

2. No shoring is necessary to place concrete slabs. This reduces cost and permits workmen to install partitions, plumbing, and to do steam fitting, without waiting for removal of the shoring.

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 Floors are rigid, quickly erected, fire-resistant and soundproof.

For complete information on J & L Junior Beams, including engineering data for general construction, see Sweet's Catalog, or send for bulletin—Engineering Data, J & L Junior Beams.

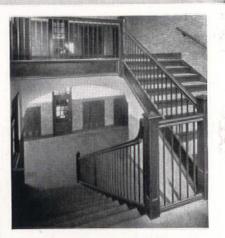


J & L Junior Beam floor construction in a modern school building. Two men place a 12-inch J & L Junior Beam, 23 feet long, without the aid of mechanical equipment.



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Specify J & L Lightweight Channels on your next job. Meanwhile, for complete information, including engineering data, see Sweet's Catalog, or send for useful folder on J & L Lightweight Channels.

### LETTERS

(Continued from page 64)

#### 6. STANDARDIZATION.

"The great Architect Gropius has said . . . standardization is the criterion of any great national culture!" Opposed to this is the universal American assumption that the public demands individuality in its homes, an assumption which of course prevents numerous intelligent economies. There are those who believe that architects and other building professionals, whose views determine what the public gets, grossly exaggerate this attitude; that, as a matter of fact, the public would not only accept but welcome a better house for the same price or less, even though reasonably standardized, if given an opportunity to assert its wishes. What view do you accept?"

Exactly half those answering this question went with Gropius, at least to the extent that they accepted the view that the public was more interested in comfort than individuality. The other half were evenly divided between those who felt that standardized parts arranged in individual ways was the answer and those who were opposed to standardization in any form.

Only two justified standardization on purely esthetic grounds, H. L. Mencken and Lewis Mumford; or rather, three, with the third, surprisingly, Henry Bruere, president of colossal Bowery Savings Bank. Says Banker Bruere:

"I incline to standardization within limits. The beautiful cities—London, Paris, Rome, Florence, etc., are so, largely because of harmonious design and materials selected, as in Italy, because they are available and suitable to environment."

Wrote Lewis Mumford:

"Gropius is right: standardization is not the enemy of culture: the real enemy of culture is bad standardization, that is, inadequate or wasteful standardization. Architecture must work in a common idiom, the vernacular of the machine: an architecture that professes to offer an alternative between a dozen different historic styles, including 'modern,' has not achieved a style."

A host of hard-headed business men support standardization as a practical measure. Because he refuses to pull his punches let John Ely Burchard speak for all of them:

"There seems to be no question that the public, in the low-income groups at least, will accept the standardized house. After all, what are their houses now but standardized—and I mean standardized not only as to typical plan and equipment but actually as to facade . . . The architect does so few houses that his views in this matter are not very important."

Harvey Wiley Corbett stood alone as the only architect to answer the question with an unqualified "they would" (accept standardization).

The middle group, which held that standardization of parts but individualized arrangement of the parts was the solution, contained Architect Kahn, Professor James Ford, and two prominent industrialists at the production end of the industry. Their common view was expressed most completely by Walter Dorwin Teague. Said Designer Teague:

"It seems to me that there is a great deal of confusion both in the minds of the public and the architectural profession as to what standardization of house prefabrication entails . . .

"It is neither practical, economical or desirable to turn out factory-built houses as completely assembled units of fixed and invariable plan. It will be possible to build houses of completely standardized parts, but these parts will be susceptible of an almost infinite number of combinations. In this way the maximum economy will be obtained, but individual tastes and needs will be served at the same time. . . ."

### 7. GOVERNMENT IN HOUSING.

Posing the question so that it was hard to wriggle out on technicalities, and without reference to particular procedures, the questionnaire asked quite simply "Is there a point where housing properly becomes a Government function?" On this basis, less than a third registered an unqualified No. About a third grudgingly admitted Government responsibility for the lowest income groups (one correspondent set the limit at \$750 per year per family) and the largest group approved the principal wholeheartedly.

Roy Wenzlick and LeGrande W. Pellett expressed themselves at some length. Said Analyst Wenzlick:

"I believe that the function of government in building or in any other field is primarily one of regulation and not of competition. I think much of our unsanitary and dilapidated housing should be condemned but I see no more reason for the government subsidizing the individual's shelter than I do for its subsidizing his food or clothing . . ."

(Continued on page 120)

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by HENDRICK

You'll find the entire field of your grille requirements covered abundantly by the comprehensive variety of designs contained in the Hendrick Line. All standard and many special, some exclusive, designs are available.

When special conditions demand it, Hendrick can, and will gladly, cooperate in the preparation of an entirely original design.

Aluminum, steel, brass, stainless, bronze, Monel are some of the materials in which Hendrick Grilles are furnished. In fact, any commercially-rolled metal can be supplied.

A handbook, "Grilles," illustrating the Hendrick Line is available. Write for a copy.

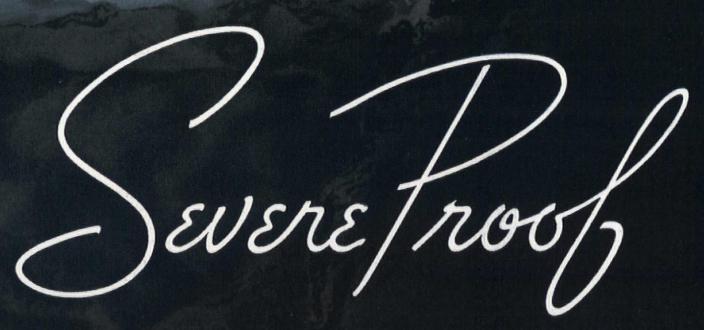


Typical of Hendrick Designs is the Basket Weave illustrated here. Like many others, this Hendrick design by harmonizing with many attractive interiors often saves the purchaser the added expense and necessary delay which attend the creation of an original design.

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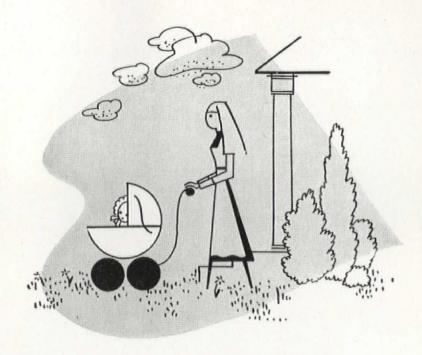
Nature's last stand—the timber line—"Severe Proof"—nothing beyond . . . As man builds, so shall he be served.

Sherarduct electrical Conduit is "Severe Proof." It has stood the test of time. Rust-proof, corrosion-proof—as long as the job lasts.

Zinc-Steel alloy, heat, zinc treated by the most advanced development of the art of galvanizing. Obtained by selection. Proof of the warrant upon application.



Rational Electric



# And then they had a baby ....

And a house with everlasting growing pains—a house that couldn't grow because it wasn't planned for the future. The added nursery wing shouted "afterthought." Its location made it impractical, spoiled its appearance—and its appearance spoiled the house.



In building there is very little beginner's luck. Houses that turn out well, that expand gracefully

when the years call for additional building, are houses that have been skillfully planned with an eye to the future.

The best eye to the future is the expert eye of an architect. No magician, no crystal-gazer, the architect nevertheless sees far enough ahead to allow in his basic plans for additions that will be integral parts of your house. He can design for your potential as well as actual needs.

"Saving" that results in costly mistakes is boomerang saving.

Families shrewd enough to consult a broker when they invest (even for sums that are fractions of what they spend on a house), families wise enough to consult a doctor when a minor illness appears—such keen-thinking people will find it equally wise (and profitable) to consult an architect when they build, for architecture, building, and renovation are subjects involving equally specialized knowledge. A good architect is just as essential in building as a good builder, good materials, sound financing.

What most people see in the house they plan is largely on the surface or in isolated details. The architect sees every step from idea to blueprint, from blueprint to livable home. His knowledge of design, materials, costs, enables him

to save needless expense. Sometimes he can actually save you enough on building costs to pay his own fee—for he represents your interests in comparing estimates of competing firms. Certainly his fee is small in comparison to the satisfaction which will be yours in a soundly planned, soundly built home.

For most people the great human experience of building a house is a once-in-a-lifetime event. Why gamble when there's only one chance?

It is myopic planning to indulge in penny-saving now which may mean pound-paying later

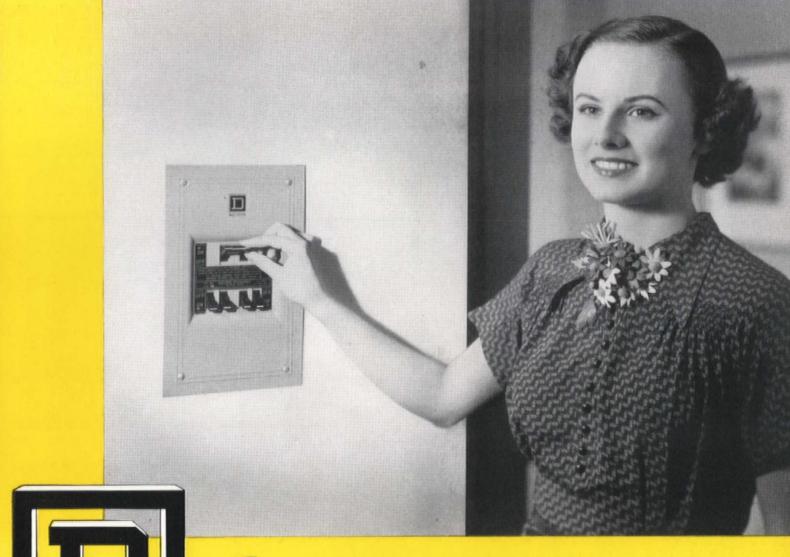


on—for in the brains, skill and experience of a good architect lies your safest insurance.

# THE ARCHITECTURAL FORUM

Published by TIME Inc., 135 East 42nd Street, New York City

THIS ADVERTISEMENT APPEARED IN TIME AND FORTUNE AND IS ONE OF A SERIES BY THE ARCHITECTURAL FORUM IN THE INTEREST OF BETTER BUILDING



# She will never change another fuse if you specify a

# MULTI-BREAKER

Multi-BreakeR is the modern method for eliminating the cost and inconvenience of replacing blown fuses.

It provides circuit breaker protection for the home at a new low cost. It also provides branch circuit switching. It costs your client little or no more than the conventional service entrance switch and fuse box.

If the electrical equipment in the homes you are designing is to be modern in every detail, it

should include the Square D Multi-BreakeR. The Multi-BreakeR is neat, compact and attractive. It can be installed in any convenient place. To be sure that your clients get this modern protection, specify that all circuits must be protected by the Square D Multi-BreakeR Load Center.

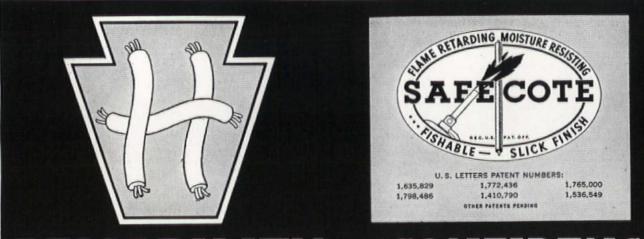
All reliable electrical contractors can supply it. Write for Bulletin C. A. 541 which describes it in detail.

# SQUARE D COMPANY

DETROIT - MILWAUKEE - LOS ANGELES

Call in a Square D Man

# HAZARD



# RELIABILITY and CONFIDENCE

# FIREKROME SAFECOTE

combines the advantages of SAFECOTE Braid with HAZARD'S well known 4 grades of Insulation...

1. Hazacode, higher in quality than the usual run of "Code" wire. 2. Intermediate, (25% rubber) tougher and more elastic. 3. Standard, (30% or "Performance" insulation) high mechanical, chemical and electrical qualities. 4. Performite, (super-aging insulation) more resistant to the effects of heat and moisture and age.

This combination of modern braid finish with an old well-known insulation makes a building wire that lasts as long as the building itself. Use Hazard Fire-krome Safecote and forget your wiring problems.

Hazard Building Wire Book No. 125, containing interesting information, sent on request.

# HAZARD INSULATED WIRE WORKS

Division of The Okonite Company WORKS: WILKES-BARRE, PA.

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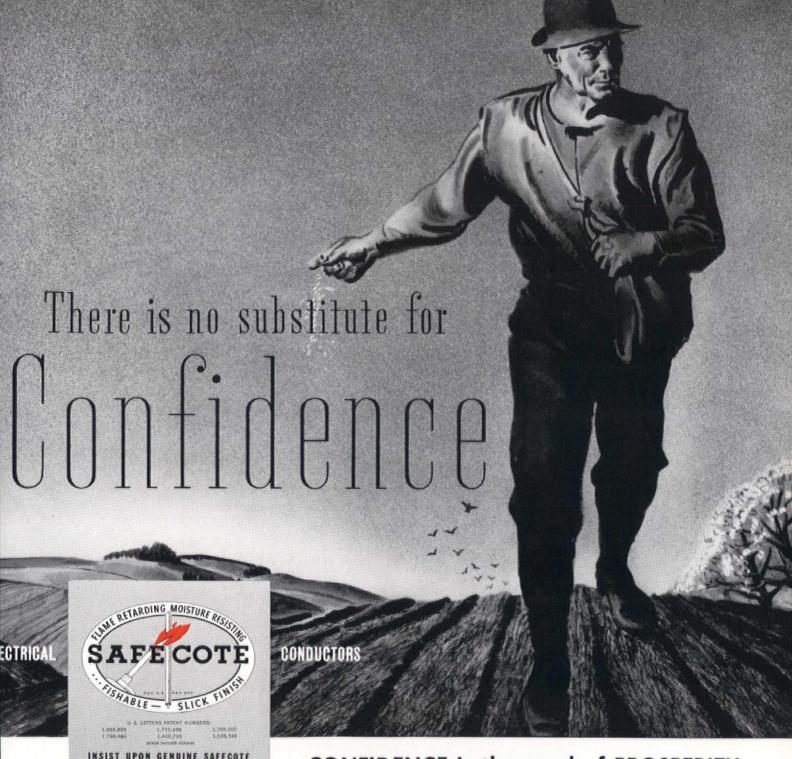
Offices:
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### BUILT AND TESTED TO SAFECOTE STANDARDS BY THESE LEADING WIRE MANUFACTURERS

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American Steel & Wire Company Anaconda Wire & Cable Company The B. M. Austin Company Bishop Wire & Cable Corporation Clifton Conduit Company Collyer Insulated Wire Company Crescent Insulated Wire & Cable Co. General Cable Corporation General Electric Company Habirshaw Cable & Wire Corporation Hazard Insulated Wire Works Div. Okonite Co. National Electric Products Corporation Paranite Wire & Cable Company Providence Insulated Wire Company John A. Roebling's Sons Company Simplex Wire & Cable Company Triangle Conduit & Cable Co., Inc. United States Rubber Products, Inc.

### **CONFIDENCE** is the seed of PROSPERITY

Just as the seniority of the hen or the egg never has been settled, so, too, the priority of success or confidence will ever be a matter of debate. Obvious it is that one begets the other—evident it is that the result is the same no matter which precedes. It has been amply demonstrated that to succeed you must have confidence. Prosperity comes as confidence grows. Safecote sales are increasing because confidence in Safecote is growing. Thus this ever widening circle of confidence becomes an ever growing volume of sales the benefits of which accrue to the advantage of every manufacturer, wholesaler, contractor, and electrician who sells or uses Safecote Electrical Conductors. There is no substitute for Safecote.

SAFECOTE PERFORMANCE SPECIFICATIONS AVAILABLE UPON REQUEST SAFECOTE LABORATORIES ARE AT YOUR DISPOSAL

GEORGE C. RICHARDS, LICENSOR'S AGENT . 155 EAST 44th STREET, NEW YORK

### LETTERS

(Continued from page 114)

Also still voting Nay were Critic Mencken, Architect Corbett, and Scnator Couzens.

But the overwhelming majority admitted the propriety of government participation in housing. Probably expressive of the precise extent of conservative acceptance of this principle was the statement of Stanford's President Wil-

... Private enterprise can accommodate the greatest portion of our population. It possesses the required capital resources, the planning ability, and the engineering skill. However, if business, financial, labor and industrial groups fail to take in hand the task of eliminating slums and blighted areas, whether in cities, villages or rural areas, housing by public authority is inevitable.

"Conditions of unhealthful living are liabilities affecting seriously our whole economic and social structure. The vital interest of government in public health, public safety, and public welfare makes the condition of housing an important concern. At what exact point the situation becomes the responsibility of any single unit of government is a moot question. There needs to be less arguing on that score and more action from leading citizens, business men, and public officials, for we cannot afford to perpetuate unwholesome housing for the wage-earning families of America.

#### 8. INTEGRATION.

"Many competent observers believe that building sorely needs greater integration. The building process is wholly a local one; there are no standards of value, not only in comparing one community with another, but even in comparing adjacent neighborhoods in the same community; the buyer of a home has no one place to turn to for authoritative information on the myriad decisions he must make . . . Do you believe an organized study of this question might produce changes which would in some degree at least improve the situation? If so, how should the study be made and by whom?

Practically all of those who answered this question agreed that such a study was desirable. question agreed that such a study was desirable. There were exceptions, representing opposite points of view. Exception No. 1, Waverly Taylor, said: "Greater stabilization of building codes will help to standardize building costs... but beyond this I consider such a study impractical." No. 2, Stuart Chase, had another idea, "We've had a hell of a lot of studies already. The trouble with housing is not with the architects or engineers, but with the hankers architects or engineers, but with the bankers and vested interests. Finance, not production, is the blockage.

While almost everyone agreed that such a study must be made, there was little agreement about who should undertake it. Among the suggestions made were the following:

"Lending institutions, building and loan associations, contractors and unions plus government assistance." Henry Bruere.

"Appropriate department of Federal government." Hugh Potter.

"A representative conference of the type of the President's Conference on Home Building and Home Ownership of 1931 . . ." James Ford.
"By the FHA." Daniel Hoan.

"By government." Senator Couzens.

"Such a study might be made by an altruistic foundation operating through organized architectural, constructional and city planning groups. It might be made by a special non-partisan commission authorized by Congress and operating, for example, through the Bureau of Standards." M.I.T.'s president, Karl T. Compton.

"... out of the hands of uplifters and other such cranks . . ." H. L. Mencken.

#### 9. COMMUNITY PLANNING

THE FORUM'S final question dealt with zoning and community planning: "Some commentators herald the approach of another real estate boom. Does the recent financial and physical condition of former boom-built properties indicate to you the necessity for more comprehensive com-munity planning, or do you believe that the present restrictions in business and residential areas are adequate to prevent unduly rapid depreciation of new buildings?"

Everyone answering this question agreed that more community planning and stricter zoning laws were needed.

LeGrande Pellett expressed the loan man's point of view:

"Without question present restrictions in business and residential areas are grossly inadequate to protect the values of residential properties."

R. M. Cheseldine said much the same thing:

"Most assuredly there must be more comprehensive community planning to prevent a recurrence of the historical building booms . . .

# Kitchen Appeal Sells Houses!



ANY SIZE OR SHAPE CUSTOM BUILT TO FIT ANY SPACE

This also applies to back and end splashers—designed for beauty and long life. No joints to pull apart-no cracks to catch dirt or hold water.

Smooth areas all at one level are thus provided. Acid resisting porcelain enameled surfaces on heavy gauge Armco iron.

Wide range of bright modern colors to harmonize with any desired color scheme.

Write for free descriptive literature and prices

#### VERIBRITE PRODUCTS

Division of

General Porcelain Enameling & Mfg. Co. 4131 West Parker Avenue Chicago, III.



The VERIBRITE sink in "America's Finest Kitchen"—new modern display kitchen of People's Gas Light & Coke Co., Chicago.



### Choice of More and More Buildings of All Kinds... For Control of Space Heating, Ventilating and Air Conditioning

Why? Because Architects, Heating Engineers and Building Owners have found in one or the other of these two distinct complete Sylphon Systems of Control—or in the many possible combinations which they offer—the ideal control result they are seeking.

For these highly developed control systems provide:

- 1. Automatic modulating control which prevents cyclic operation with its alternately "too hot"—"too cold"—"too dry" or "too humid" conditions and objectionable drafts. Hence it assures constant healthful, pleasant conditions in the area controlled, at all times.
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- 4. Moderate first cost—extremely low operating cost—practically no maintenance.

Investigate Sylphon Systems of Control, developed and manufactured by the Fulton Sylphon Co.—and sold by Sylphon Control Systems, Inc., the systems with 35 years of specialization in temperature regulation behind them, and countless installations of Sylphon Controls bearing witness to their highly satisfactory performance on the job.

For complete details, get in touch with the nearest office of Sylphon Control Systems, Inc.

# SYLPHON CONTROL SYSTEMS, INC. NEW YORK, N. Y. KNOXVILLE, TENN.

Subsidiary of Fulton Sylphon Company

Boston... Philadelphia... Baltimore... Atlanta... Cleveland... St. Louis... Detroit... Chicago... Seattle... Portland... San Francisco... Los Angeles... Dallas and in 35 other principal cities in the U.S.A., Montreal, Canada and London, England.

# TIMKEN BUILT

# NEW LOW-PRICED AIR-CONDITIONING OILFURNACE

Timken's new Winter Air-Conditioning Oilfurnace is engineered and priced for the small-home market. It meets TIMKEN IS AUVERTISED all the requirements of buyers who demand a modern air-conditioning heating plant-high in efficiency, low in operating expense. Timken-built throughout, the Model GC maintains Timken's sixty-year-old tradition of high quality materials and precision workmanship. Timken manufactures a complete line of air-conditioning units. The deluxe series is fired with the Rotary Wall-Flame Burner;

the Model GC 20-A is fired with the Pressure-Type Burner. This variety of models at a wide range in prices

> enables you to specify the Timken units that will best meet the requirements of your

clients at a price they can afford. You can recommend Timken products with confidence because they are backed by the broadest experience in the industry and \$15,000,000 in resources. More than 125,000 satisfied users attest to Timken's superiority, dependability, and economy. Specify Timken for trouble-free performance!

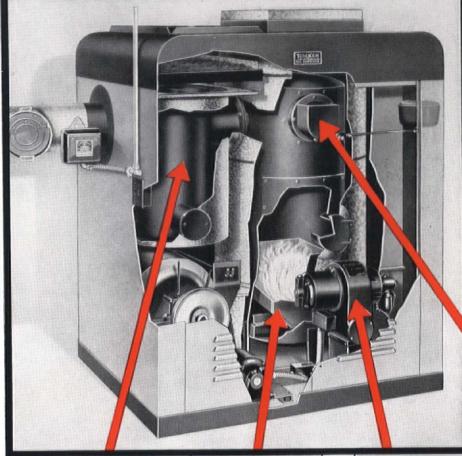
For people who prefer radiator heat, or split-system air conditioning, Timken makes two series of oil-burning boilers in a wide range of prices and capacities. Timken Oilboilers are completely automatic home heating units that also supply domestic hot water the year around.

# TIMKEN asilent automatic

Rotary Wall Flame Burners . . Pressure Type Burners . . Oilfurnaces . . Oil Boilers . . Air Conditioning Units . . Water Heaters

AND

# Perfect FOR SMALL HOMES

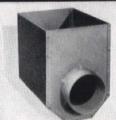


# EXCLUSIVE Timken Features Assure Matchless Fuel Economy

Timken has built many exclusive money-saving features in this new winter Air-Conditioning Oilfurnace. Such outstanding features as Flame Control, Chromium-Steel Firebox, Heat Economizer, Counter-Flow make it easy to explain how Timken pays dividends in savings year after year. Coupled with this are beauty and compactness of design, the ability to stand up under constant use, and time-tested Timken construction. Timken has everything your clients could possibly desire. Here, indeed, is quality product that honestly merits your stamp of approval!



HEAT ECONOMIZER makes burned gases give up maximum heat ... unusually large heating surfaces assure more warmth per gallon of oil ... lower fuel cost.



CHROMIUM-STEEL FIREBOX converts entire combustion chamber into effective heating surface. Factory assembled—eliminates all fire brick.



PRESSURE-TYPE BURNER built especially for this unit... flange mounted ... has patented Flame Control ... low fuel costs ... amazingly quiet operation.



HUMIDIFIER conditions air to maintain proper humidity necessary for health and comfort during heating season. Automatic water supply mechanism . . . dependable operation.

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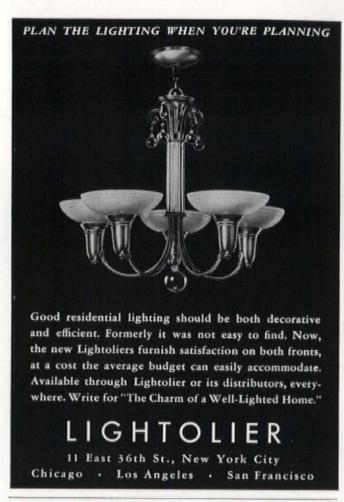
Timken Silent Automatic Division
The Timken-Detroit Axle Co. 221 Clark Ave., Detroit, Mich.
Please send me complete information about your new
low-priced GC 20-A Air-Conditioning Oilfurnace.

Firm Name

Address

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WINTER SPRING SUMMER FALL—

> YOU CAN Rely on

# Gimco Rock Wool

Throughout the seasons Gimco Rock Wool will provide adequate protection against extremes in temperature. It tempers the inside temperature of the home through the blizzards of winter, the vagaries of spring, the heat of summer and the chill of fall,

Heating unit costs in the home under construction can be materially reduced where adequate home insulation is specified.

Gimco Sealal, the semi-rigid, fluffy, fireproof "bat" type of insulation is especially adapted to homes under construction. It will reduce fuel costs up to 50% in winter and lower inside temperatures as much as 15 degrees in summer.

Write for complete data on Gimco House Insulation today.



GENERAL INSULATING & MFG. CO., Alexandria, Ind. WORLD'S LARGEST EXCLUSIVE MANUFACTURERS of ROCK WOOL PRODUCTS





# Azrock is the "PLUS" in pleasing your clients

In the presentation of your plans, the specification of AZROCK Tile for floors will receive hearty approval both for its distinctive modern beauty and its many practical points of superiority over ordinary floor coverings.

AZROCK is resilient for foot comfort and quiet, fire-proof on concrete and strongly fire-resistant over inflammable sub-floors. Burning cigars or cigarettes do not blemish the surface. AZROCK is moisture-proof, sanitary, easily cleaned, inexpensively maintained and will not warp nor check. In AZROCK you provide a durable floor for a lifetime of hard and steady service.

AZROCK is available in a variety of colors and in your own planned design. National distribution; write for name of nearest distributing contractor. UVALDE ROCK ASPHALT CO., San Antonio, Texas.





# HOFFMAN AIR CONDITIONED VACUUM HEATING SYSTEMS COST NO MORE TO OPERATE THAN ORDINARY ONE-PIPE STEAM!

Among the many acknowledged superiorities of radiator heat can now be included Winter Air Conditioning . . . involving only the simplest kind of equipment and installation work.

For example, an inexpensive one-pipe steam heating system when equipped with Hoffman Vacuum Valves and a Hoffman Air Conditioner will give the home builder or modernizer the maximum of luxurious comfort... ample, flexible heating plus all the benefits of cleansed, circulated and properly humidified air. At no greater expense, mind you, because the fuel savings made by Hoffman Vacuum Valves more than cover the operating cost of the Air Conditioner.

In new and old homes alike, the simple duct work of the Hoffman Air Conditioner is easily placed. And nothing could be less complicated than an installation of Hoffman Vacuum Valves. This is the genuine Comfort System . . . made to order for the small home owner.



#### TWO NEW BOOKS

The story of Hoffman Air Conditioning with Radiator Heat is presented in a new, profusely illustrated 20-page book, while installation instructions for the Conditioner are given in a supplementary Manual. Write for your copies.

# SPECIALTY CO., Inc.

Dept. AF-10, Waterbury, Conn.

Makers of Venting Valves, Supply Valves, Traps, Pumps and Air Conditioners—sold everywhere by leading wholesalers of Heating and Plumbing equipment

# ARCHITECTURALLY SPEAKING

by

### OTIS ELEVATOR COMPANY

We are at this time announcing to the world at large what we consider an important step in elevator progress. We are now offering, for every type of service (passenger and freight), elevators whose control mechanism is entirely operated by buttons. As a means of identification, these elevators will be classified under the head of Finger-Tip Control.



We're going to run over briefly the various types of elevators with Finger-Tip Control in order to give you a glimpse at the installation possibilities. The logical place to start is with Signal Control, since it is a member of the Finger-Tip Control group that is known to you and has really been the inspiration for the complete Finger-Tip line.



No use going into a lengthy explanation of Signal Control. You have seen it in operation in most of the tall buildings. It is no news to you that it offers the finest type of elevator service available today.



But here's an important addition. Signal Control is now available for geared machines. This means that Signal Control can now be had for the medium-sized building. Geared Signal Control opens up such vast modernization possibilities that it will be discussed at length in "Architecturally Speaking" at a later date.



Next Finger-Tip passenger elevator classification is Collective Control. This machine gives the highest type of service in buildings where a regular attendant is not necessary. In fact, Collective Control can eliminate the elevator operator either wholly or partially in a large number of buildings that now must have an operator because they have Car-Switch Control elevators.



And Single-Call Control — a modified service type for personal operation. Particularly adapted to homes and small apartment buildings.

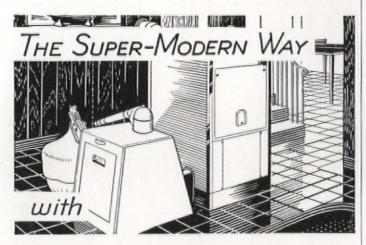


And now a phase of Finger-Tip Control that deserves special emphasis. Both Signal Control and Collective Control are available for freight elevator service. This should open an extensive new field of modernization, as well as new installation, for it offers the building owner or builder something "way out in front" in freight elevators. Also Double-Button and Dualite Control are offered — two slightly different types of control suited to modified service and neither of which requires a car attendant. Single-Call Control is likewise available for the service elevator installation that will be called upon for light, intermittent service.



The big point to keep in mind about Finger-Tip Control is that every type of building has an opportunity to minimize the human element in elevator operation and thereby better elevator service to a marked degree. We feel that Finger-Tip Control is a giant stride in the direction of progress. That it marks a definite milestone in elevator history. These are high-sounding words, maybe — but we are sincere in saying that we feel they are justified.

# AUTOMATIC HEAT



# D& HONE-CLEANED ANTHRACITE

Investigate this form of Automatic Heat before submitting tentative specifications to your clients. Its cost is less and it is safer, cleaner and responds to control more quickly and accurately than other automatic fuels.

An electrically operated stoker feeds the fuel to the heater and maintains any temperature desired. A thermostat, located at some convenient point upstairs, controls the heat. In summer the same plant will supply hot water in great abundance at a low cost.

The electrically operated stoker is an attractive unit of modern home equipment that permits the utilization of the cellar for games or a children's playroom, adding an extra room to the house.

Correspondence from Architects and Builders is invited by

THE HUDSON COAL COMPANY Scranton, Pa.



Producers of D&H Cone-Cleaned Anthracite

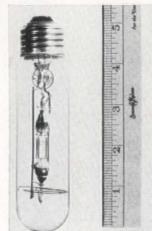
#### PRODUCTS AND PRACTICE

(Continued from page 46)

cent lamp. Because this blending process is additive, the full light value of both tube and lamp are utilized in the new unit. The new light is particularly recommended for industrial and commercial lighting applications involving accurate color differentiation, critical inspection, or manufacturing operations which involve difficult visual problems.

#### Mercury Vapor Lamp

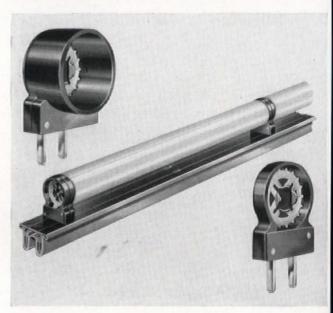
The Westinghouse Lamp Co. and the General Electric Vapor Lamp Co. are making a small bulb-type mercury vapor lamp which gives as much illumination as the ordinary 200 watt incandescent lamp, although it consumes only 85 watts.



The light source is a minute column of mercury vapor less than an inch long in a sealed quartz tube. This is mounted within a standard T-10 bulb (5½ in. long x 1¼ in. in diameter) equipped with a standard screw base. A special compact transformer has been developed to go with it. Small size and high efficiency combined with the restricted area and high unit brightness of the light source permit its combination with incandescent lamps in compact "artificial daylight" fixtures and open up possibilities in the scientific and industrial fields.

#### **Lumiline Lamps**

The adaptability of these long glass tubes to modern decorative schemes and display lighting has caused a rapid increase in their use. National Electric Products Corporation has developed a special plug by which the lumiline tubes can be



set directly over their "Plug-in" strip in any number or spacing of units. The plug-in strip itself consists of a double metal channel covered with a synthetic resin cap which has plug-in openings every 6 in. and can be run along the wall either as surface wiring or flush with the wall or base.

(Continued on page 132)

# Modern Homes demand



ROOFING—Eternit Timbertex Asbestos-Cement Shingles. American Method.

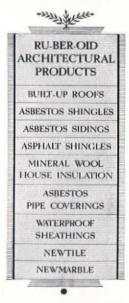
> INSULATION—Ruberoid Mineral **Wool House Insulation.**

SIDE WALLS - Eternit Timbertex Colonial Asbestos - Cement Siding Shingles.

ICTURED are three modern RU-BER-OID Building Products that no architect or builder should ignore. Each contributes yearly dividends in economy, comfort, and safety.

#### Timbertex Asbestos-Cement Shingles and Sidings

Today you can have colorful roofs and side walls, with the charm of weathered cypress, that are rot-proof, fire-proof, termite-defying and age-enduring. These asbestos-cement shingles are made in colorful wood tones, and never require painting or staining. There is a style to fit every type of architecture and to please every purse. They offer beauty and sure protection with surprising economy.



#### **RU-BER-OID Mineral Wool House Insulation**

This indestructible wool is one of today's most efficient insulating materials. It is absolutely fire-proof, vermin-proof, is inert toward moisture. It affords excellent sound-deadening and acoustical qualities. Ru-BER-OID Mineral Wool, whether installed loose or in bats, can be expected to save 20% to 35% in fuel bills in winter, and make the interior of a house 10 to 15 degrees cooler in summer. Obtainable loose, packed in 35 lb. bags, or in bats 15" x 23".

Investigate all three of these modern RU-BER-OID Building Products. Mail the couponfor specification data. Check also any other RU-BER-OID products that may interest you.

The RUBEROID Co., 500 Fifth Avenue, New York, N. Y.

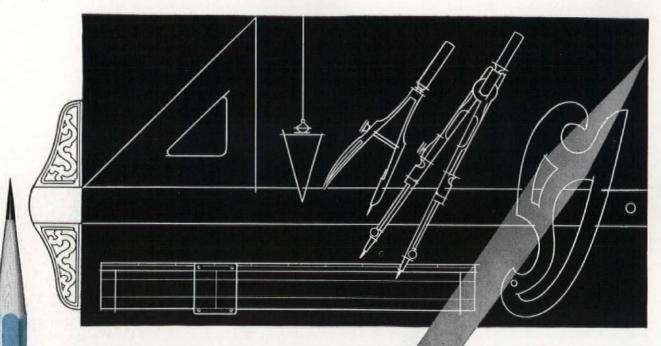
Please send specification data covering the Ruberoid Products checked. Asphalt Shingles Timbertex Sidings

Newtile Wall Panels Built-up Roofs □

Asbestos Pipe Coverings Newmarble Wall Panels [ Mineral Wool House Insulation

Timbertex Shingles

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To your other precision instruments you can now add

# A PRECISION DRAWING PENCIL

# "Chemi-Sealed" TURQUOISE

SCIENTIFIC ACCURACY OF GRADING

In this basically better drawing pencil, the entire range of 17 grades is spaced with scientific accuracy entirely by adjusting the proportions of graphite and clay in 17 different lead formulas. We use wax for smoothness only and never to change the grading of a lead by varying the hardness of the wax. The result is 17 inherently accurate grades, each as true as a plumb line—and "Chemi-Sealed" construction keeps them true indefinitely.

#### STRONGER POINTS

The "Chemi-Sealed" process, tested for four years in the MIKADO office pencil, first locks the wood fibres at the core of the pencil with a resinous binder into a rigid, nonsplitting sheath for the lead (U. S. Pat. No. 1,854,905). Then there is deposited on the waxed leads an impervious coating which permits a perfect bond of lead to wood (U. S. Pat. No. 1,892,508).

In "Chemi-Scaled" TURQUOISE, lead and wood, inseparably united, combine their strength against point breakage in sharpening and in use.

#### SMOOTHNESS PERMANENTLY SEALED IN

To make them supremely smooth, TURQUOISE leads are impregnated with a blend of waxes until every microscopic particle has a film of lubricant to glide on. In this pencil alone, none of the wax can seep into the wood—it is sealed in for permanent smoothness by the coating deposited on the lead in the "Chemi-Sealed" process.

#### WHAT "CHEMI-SEALED" TURQUOISE MEANS TO YOU

Precision grading is an aid to perfect drawings. "Chemi-Sealed" construction ends the annoyance, waste and loss of time from broken points, Sealedin smoothness speeds your work. For personal proof of TURQUOISE quality, write for a free sample in any grade you desire, giving your supplier's name and address, and mentioning this publication,



The broken white line indicates the impervious coating which insures a perfect union of lead to wood.



Heat the point of a TURQUOISE pencil. The shiny film which exudes is proof of the waxes which are sealed in the lead.



"Chemi-Sealed"

TURQUOISE

EAGLE PENCIL COMPANY, 703 EAST 13th ST., NEW YORK CITY

Manufacturers of writing and drawing pencils since 1856

# WHAT IS "AIR CONDITIONING"?

To be sure you're getting <a href="mailto:true">true</a> air conditioning, check these services before you buy:

### \*SUMMER AIR CONDITIONING

#### at least

- 1. Cools the air
- 2. Dehumidifies the air
- 3. Circulates the air

#### \*YEAR-ROUND AIR CONDITIONING

#### at least

- 1. Cools and dehumidifies the air in summer
- 2. Heats and humidifies the air in winter
- 3. Circulates the air

### \*WINTER AIR CONDITIONING

#### at least

- 1. Heats the air
- 2. Humidifies the air
- 3. Circulates the air

Most air conditioning, in addition, cleans the air

THE words "air conditioning" and "air conditioned" are often misused. This advertisement is intended to protect you against appliances improperly called "air conditioners"—appliances that do not perform the minimum services which *true* air conditioning does perform.

True air conditioning offers real, proven, widely-accepted values. It is a tremendous contribution to human health and comfort. In industry it permits many improvements

and economies hitherto impossible. Commercially, in restaurants, theatres, hotels and stores, it pays big dividends in increased patronage, consumer good will, and employee efficiency. There are on the market today appliances which perform one or more of the functions of *true* air conditioning, yet which do not perform the minimum necessary to properly merit the term "air conditioning." Many of these appliances efficiently fulfill the limited purposes for which they are intended. But, when they are called "air conditioners," more is promised than can be fulfilled.

For the protection of your investment and for your personal satisfaction, insist on true

air conditioning—which means at least the services listed above.

\*DEFINITIONS USED BY THE UNITED STATES DEPARTMENT OF COMMERCE AND THE NATIONAL BETTER BUSINESS BURFAU.



This advertisement is sponsored jointly by the Air Conditioning Manufacturers' Association and by Kinetic Chemicals, Inc.



# Does your design call for BLACK TRIM or GREEN?

If you are planning a new building or an alteration in which either black or green is called for on the facade, we suggest that you consider Virginia Black Serpentine or Virginia Tremolite Green.

The photo above shows polished spandrels of natural, quarried Black Serpentine used to accentuate the horizontal lines, on the Lapeyre-Miltenberger Convalescent Home, New Orleans, La., by Architects Weiss. Drevfous and Seiferth.

Both of these stones are highly resistant to weather action, and like marble or granite, polish naturally. Experience shows that they will hold their polish substantially longer than any marble commercially used.

Virginia Tremolite Green is a recent addition to the line. When honed, it shows clear white markings, while it polishes to a pleasing, dark green. Both materials are becoming increasingly popular, also, for interior trim. A set of samples, conveniently boxed, showing these and other stones from the Alberene Quarries in Virginia, will be sent you gladly, and inquiries will be answered promptly and carefully.

#### ALBERENE STONE CORPORATION OF VIRGINIA

419 Fourth Avenue, New York • Quarries and Mills at Schuyler, Va.

Sales Offices in Principal Cities

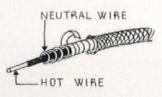


#### PRODUCTS AND PRACTICE

(Continued from page 128)

#### **ELECTRIC WIRING**

The trend in this field has been toward reducing cost through the use of less expensive materials and those which require less labor for their installation. Wrapped bare neutral wiring



has been accepted by the National Board of Fire Underwriters for service entrance cable, and service entrance cable itself instead of wire drawn through rigid conduit is being used for entrance to residences, and

for range connections inside the house. Non-metallic wire coverings and boxes are becoming more important, as are low capacity circuit breakers. Surface wiring is making progress in remodeling work.

#### **New Multi-breaker Load Center**

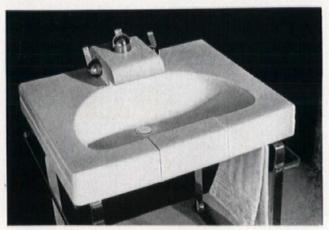
As a substitute for the conventional 115/230 volt a.c. entrance and branch circuit protective equipment, a small



low-priced Multi-breaker Load Center is now being manufactured by both the Westinghouse Electric & Manufacturing Co. and the Square D. Company. The Multi-breaker Load Center consists of one or more small but highly effective automatic circuit breakers hinge-mounted in a cabinet. This eliminates the use of fuses with the consequent annoyance and interruption of service when a fuse blows out and must be replaced.

#### PLUMBING AND BATHROOM EQUIPMENT

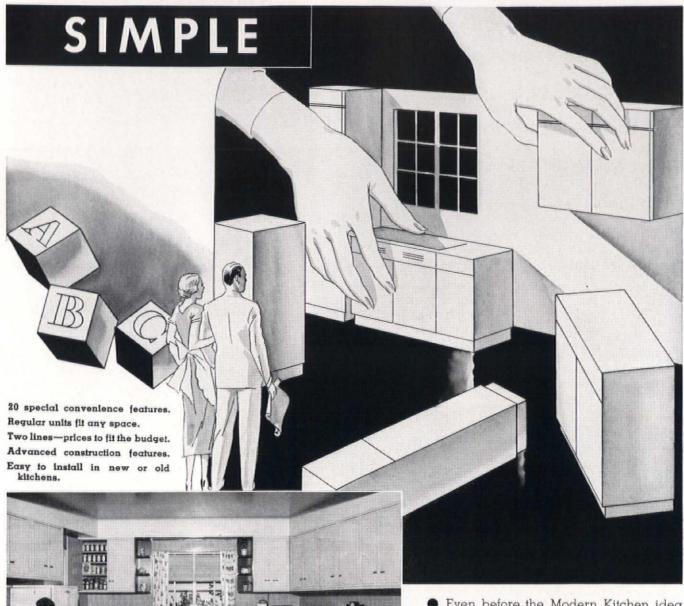
Developments made in plumbing in the past year have been chiefly in new designs of fittings and fixtures. Manufacturers have restyled their merchandise to conform with modern bathroom planning, as represented in the lines of Crane Com-



Crane "Neuvogue" Lavatory

pany, Kohler Co., and Standard Sanitary Manufacturing Co. The Briggs Manufacturing Company is featuring fixtures made of porcelain enameled steel, 60 per cent lighter than cast iron, pressed out in much the same manner as automobile bodies. Noteworthy are the medicine cabinets of the Miami Cabinet Division of the Philip Carey Com-

(Continued on page 134)



SEND FOR NEW BOOKLET . . . .

Every architect, builder and home owner should read our new booklet "The Heart of the Home" before planning a new kitchen. A copy will be sent on request.

 Even before the Modern Kitchen idea became popular, Elgin was pioneering in this field. Many of the features now so popular were originated or improved by Elgin engineers: flush front, sound insullation, rubber bumpers, adjustable shelves, toe space, recessed back, and many of the convenience features.

#### 65 Standardized Kitchen Cabinet Units

Easy to Plan — Even a layman can plan a kitchen with Elgin units. The sizes work together to fit any space available.

Easy to Buy — The Standardized sizes permit manufacturing economies which bring down the unit cost within the reach of the modest budget. Two complete Elgin lines available.

Easy to Install — The recessed backs on all units make installation simple under all conditions - new or old buildings. Units slip into place with a minimum of preparation.



#### ELGIN STOVE & OVEN COMPANY

653 North State Street

Elgin, Illinois

EEL KITCHEN CABINETS

# More Covert Fireplace Dampers were specified than all other makes combined in Forum's "Small House" Issue

The Small House Reference Number published by The Architectural Forum, featured 101 of the finest homes erected during 1935. Fireplace specifications were published for 72 of the houses. 39 of the 72 were "Covert."

The fact that the architects for these homes specified more Covert Fireplace Equipment than they



did all other makes combined, indicates that the performance of Covert Dampers, etc. during the pastforty years has earned the preference demonstrated by the "Small House" Specifications.

In addition to highest quality, we would like to remind architects and contractors that friendly, cordial service is still part of the Covert Plan of assuring complete satisfaction to the profession as well as to their clients.

#### "Attractive Fireplaces and How to Build Them"

The brochure, "Attractive Fireplaces and How to Build Them," contains working drawings as well as photos of completed fireplaces. It will prove a welcome addition to your Fireplace Data File, and copies are yours for the asking.

### H. W. COVERT CO.

229 East 37th St.

New York



Radiheater

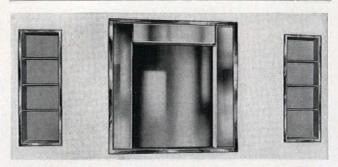
The PERFECTED Fireplace by COVERT

THE BOOKLET SHOWN
ALONGSIDE, CONTAINS FULL
INFORMATION ABOUT RADIHEATER, A STEEL FIREPLACE
UNIT WITH SEVERAL OUTSTANDING ADVANTAGES.
RADIHEATER CAN BE SPECIFIED WITH COMPLETE ASSURANCE. WE WILL BE
HAPPY TO SEND COPIES OF
THE BOOKLET. PLEASE
WRITE.

COVERT . . . . FIREPLACE EQUIPMENT . . . . SINCE 1896

#### PRODUCTS AND PRACTICE

(Continued from page 132)

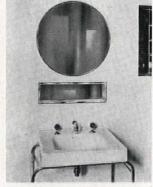


MIAMI CABINETS

pany. The circular mirror conceals a cabinet and is so mounted that the mirror pulls forward. The rectangular

mirror has lighting concealed behind its colored glass border.

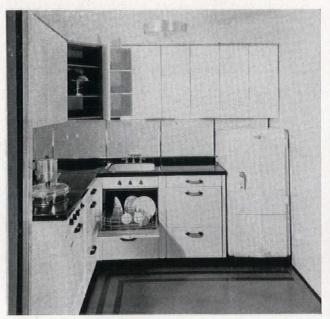
More hot water tanks are being made of non-corrosive materials, such as copper and Monel metal and other alloys. Copper tubing, in spite of the opposition of the plumbers' unions, is being more widely used. On the other hand, the introduction of factory assemblies which eliminate job cutting, threading, and fitting is still being successfully blocked by trade union opposition.



MIAMI CABINETS

#### KITCHEN EQUIPMENT

General Electric Module Kitchen. Trying to fit together the various odd sizes of kitchen equipment and cabinets is almost like working out a jigsaw puzzle and the result is never quite

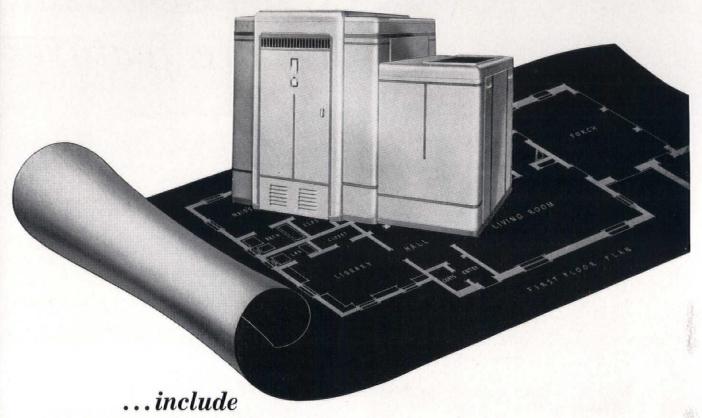


GENERAL ELECTRIC KITCHEN

like the artist's conception in the women's magazines. With this in mind the General Electric Co. has produced a simple module kitchen. Refrigerator, range, sink, and dishwasher are the same width and depth; so are the base cabinets that

(Continued on page 136)

# Design for MODERN living



### SUNBEAM AIR CONDITIONING

#### in your plans

Here are some of the reasons why architects are specifying Sunbeam Air Conditioning in new and remodeled homes:

- A home with Sunbeam Air Conditioning is completely modern. It is a feature that everybody wants.
- All winter long Sunbeam Air Conditioning circulates clean, warm, humidified air. It is automatic in operation. Models for every fuel: coal, oil or gas.
- In summer, a cooling effect is possible through circulation of cleaned, filtered, night air. Mechanical refrigeration and dehumidification can be added, if desired.

All this additional comfort goes into your homes at little or no additional cost. Sunbeam Air Conditioning sometimes costs less than an ordinary heating system. There is the correct unit for every home that you plan . . . large or small . . . with oil, coal, or gas. Even homes without basements can enjoy this modern comfort.

Let Sunbeam lay out the air conditioning. Experienced engineers will work out every detail without any expense to you. Take advantage of Sunbeam's half century of experience in heating and air treatment. Write today for full information on this free layout service and Sunbeam's complete line of Air Conditioners.

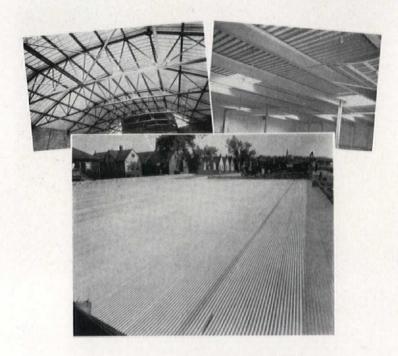
# THE FOX FURNACE COMPANY ELYRIA, OHIO

Division of American Radiator & Standard Sanitary Corporation

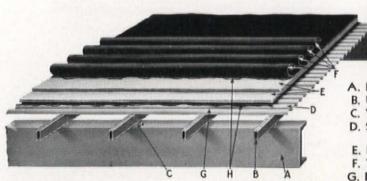


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# A NEW, LOWER COST ROOF DECK with more features



- I. Exceptionally Rigid.
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- 6. Engineered to the Project.
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- 10. Efficiently Braces Entire Structure.



#### UNIVERSAL ROOF DECK

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- B. Universal Sections (Copper Bearing Steel)
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- D. Special Corrugated Top Sheet (Copper Bearing Steel)
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- F. Waterproofing
- G. Drive Screws or Welds
- H. Asphalt



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THE UNIVERSAL METAL SECTIONS COMPANY 1740 E. 12th Street, Cleveland, Ohio

Please send catalog and engineering data.

NAME	TITLE
ADDRESS	STATE



#### GLASS ON THE WATERLINE, TOO....

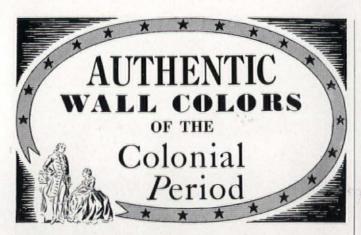
This California beach house presents an unusual and interesting treatment of the Corner Window used in conjunction with the Picture Window. Glass, dominating factor of the 1936 skyline, appears here as a vital, inspiring force on the waterline as well. Note the well-conceived manner in which the almost uninterrupted glass surface moves an ever-changing seascape

practically into the house itself, painting a bright and living mural on the wall. This fusion of outdoors and indoors is apparent in the great majority of current architectural designs. It is realized through a generous and intelligent use of glazed areas and is enhanced by the specification of high-quality glass that serves its purpose without distorting the vision or disturbing it by even the slightest waviness. The house shown above is the residence of S. M. Griffith at Lido Isle, Newport Beach, California. Donald B. Kirby is

the architect; Gordon B. Findlay the general contractor. It is glazed throughout with the products of Libbey \*Owens \* Ford Glass Company...Toledo, Ohio.



LIBBEY OWENS FORD Juality Glass



At Williamsburg, Virginia, many of the rooms in the Governor's Palace, the Raleigh Tavern, St. George Tucker House, and other buildings in the Restoration, are painted in "beautiful colors lost to general knowledge for more than a century. Some of them are: mulberry, raspberry, unusual greens and blue greens, red browns and warm beiges. Decorators are prescribing them to be used as fitting and authentic backgrounds for early American furniture."

#### True Colors plus extreme clarity

MURAL-TONE Casein Wall Paint, since it is made in ten pastel and twelve deep colors, and White, permits the exact duplication of the colors which have gained prominence through their use at Williamsburg. However, in addition to the true color, this improved casein paint, adds a clarity and depth of tone which heightens the beauty of the wall or ceiling.

The mixing directions for four of the more popular colors follow:

# How To Reproduce Typical Williamsburg Colors: GOVERNOR'S PALACE (Woodwork in Room 302) Mural-tone Positive Color Black. 2 parts Mural-tone Positive Color Bright Red. 4 parts Mural-tone Positive Color Golden Yellow. 1 part RALEIGH TAVERN (Woodwork in the Apollo Room) Mural-tone White. 6 parts Mural-tone Positive Color Ult. Blue 1½ parts Mural-tone Positive Color Chr. Oxide Green. 1 part Mural-tone Positive Color Raw Umber. 1½ parts Mural-tone Positive Color Black. 1 part GOVERNOR'S PALACE (East Building) (Panels in the North Room, First Floor) Mural-tone Positive Color Raw Sienna 3 parts Mural-tone Positive Color Raw Sienna 3 parts Mural-tone Positive Color Black. 4 part ST. GEORGE TUCKER HOUSE (Woodwork in Parlor) Mural-tone White. 10 parts Mural-tone Positive Color Raw Umber. 2 parts Mural-tone Positive Color Raw Umber. 2 parts Mural-tone Positive Color Raw Umber. 2 parts Mural-tone Positive Color Chr. Oxide Green. 3 parts Mural-tone Positive Color Chr. Oxide Green. 3 parts

Architects can specify, and decorators and owners can use MURAL-TONE with complete assurance that the effects wanted will be obtained and that the cost of painting will be reduced as much as twenty-five per cent. This money-saving feature (based on time, labor and material) has been proved under all conditions during the past two years.

One coat covers and hides on most surfaces, and MURAL-TONE can be used on practically every surface, i.e. plaster, cement,

insulating and wall boards, concrete, wall paper, etc., for new or old construction. Samples will be supplied gladly. Please address THE MURALO COMPANY, INC. (Founded 1894), 574 Richmond Terrace, Staten Island, N. Y. Branches—Atlanta—Boston—Chicago—San Francisco.



#### PRODUCTS AND PRACTICE

(Continued from page 134)

go with them. The hanging cabinets, even the filler pieces which cover the wall between base and hanging units, con-



ARCODE UNITS

form exactly to the established width. Thus, we have a kitchen in which every piece of equipment is interchangeable. Arrangements can be varied and equipment substituted for cabinets as desired.

Arcode Kitchen Units. The approach of the Accessories Co., a division of the American Radiator Co., was to integrate the kitchen cabinets with the building. The units can act as partitions as well as cabinets, carry not only their own load but the

floor above them. Pipe enclosures, heating and ventilating ducts, fans and louvers are standard parts of these service units. A module system permits a comparatively few standardized parts to be built up into a multiplicity of sizes and arrangements and give a wide flexibility of use.

#### Low Temperature Refrigerator

In order to provide better food preservation, Norge has brought out a refrigerator which maintains a lower temperature and at the same time a higher degree of humidity. Excessive dehydration caused by condensation on a low temperature cooling coil is avoided by using a larger coil having a higher temperature. As a higher temperature coil would not freeze ice cubes fast enough, the ice freezing compartment is insulated from the rest of the box and is provided with a separate low temperature coil.

#### **Waste Disposal Unit**

A completely new idea in the field of kitchen equipment is the General Electric Company's waste disposal unit. All kitchen refuse except large bones, metal, or glass, is deposited in a receptacle which takes the place of the sink drain. The refuse is finely ground by electrically driven cutters and washed down the waste line by water from the sink.

#### INSULATION

In the cooler parts of the country few good houses are now built without insulation in the exterior walls and roof or upper ceiling. The saving in fuel bills usually soon pays for the insulation, and greater comfort, summer and winter, is obtained.

An increasing realization that moisture absorption causes a loss in insulating value is causing many manufacturers to find ways of increasing the moisture resistant property of their products.

#### STANDARDIZATION

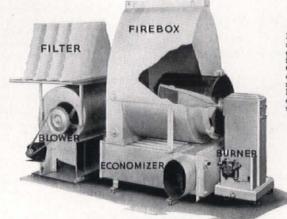
The work of simplification and standardization progresses under the sponsorship of the American Standards Association, ably aided by the National Bureau of Standards and its personnel, and by industry and professional associations. Important this year has been the organization of a Building Codes Correlating Committee which is working on setting up an up-to-date basic building code. There are now more than 1,600 building codes in the U.S., many of which hinder the introduction of improved and economical methods and materials

During 1936 standards have been established for the measurement of sound, and for hardwood flooring, and specifications for wiring and air conditioning have been proposed.

## GOOD because its parts are GOOD

AIR FILTER—An exclusive Tempered-Aire development. It consists of a series of collector screens made of special woven fabric and having a tremendous filtering area. Screens may be washed in the washing machine. Easily removed and put back by lifting and replacing retaining rings.





ECONOMIZER—Another exclusive Tempered-Aire feature. Hot gases are drawn downward from firebox through Economizer tubes. Cool air from blower passes first over the moderately heated Economizer surfaces, then up over the hotter walls of firebox. This counterflow principle extracts and uses practically all of the heat.



ALL UNITS CO-ORDINATED—Note how compactly all units are housed in the Tempered-Aire casing and how each is designed with relation to the other. Filter, multivane blower, Economizer, firebox walls and humidifier are all in logical sequences.

#### AIR CONDITIONING SYSTEM THE OWNERS PRAISE and ARCHITECTS PREFER

Tempered-Aire is the only air conditioning system which is designed and built complete, in one factory, where the entire system, from oil burner to ducts is under one undivided responsibility.

This responsibility eases the architect's task at every stage, from framing the house to final test.

It insures a correct engineering layout. It saves time for builders and sub-contractors. It reduces

supervision to a matter of form. And it guarantees a finished job that will please the owner.

Every unit in Tempered-Aire

OIL BURNER AND FIREBOWL—Oil burner and firebowl are coordinated. Complete combustion of the oil is secured by coordinating the oil spray, the air delivery and the shape of the refractory firebowl.





of a water system—an assembly of uniform, standard parts and fittings, made for each other and to standard building measurements.

DUCTS—They go together like the pipes

is coordinated with every other unit. Oil burner, furnace, economizer, humidifier, filter and blower are enclosed in one compact cabinet. The Gar Wood duct system, built to standard building measurements, is installed in one stage and unites with the cabinet without "tailor-made" trunk lines.

Gar Wood field engineers cooperate with architects and builders throughout and Gar Wood service protects the owner when the

house is built.

That's why architects prefer Tempered-Aire - because the system and its builders stand behind them.



FIREBOWL AND FIREBOX—Furnace and firebowl are coordinated. Flame is projected into the firebox without touching the metal walls, so no firebrick lining is necessary. Complete radiation of heat through all firebox walls is thus secured.

AIR CONDITIONING DIVISION

### GAR WOOD INDUSTRIES, INC.

DETROIT

MICHIGAN

# Vistinguished and MODERN

GOOD TASTE in modern treatment is reflected in the proper selection of decorative trim.

Pyramid Snap-On Mouldings, with their economical, easy installation features, permit their use where they most effectively distinguish modern architectural design. Often a labor saving of 50% is possible through specification of Pyramid Snap-On Mouldings.

Pyramid Snap-On Mouldings, with a wide variety of shapes, and Stainless Steel, Bronze, Copper or Brass finishes, afford permanent trims for home, office, apartment or store room.

To install, First: Tack on track. Second: Hook flange of moulding under one side of track. Third: Snap on Pyramid Moulding with the finger tips. They will go anywhere the track can be nailed.



Some Pyramid Mouldings patterns are suggested by the border treatment. A more representative showing with full installation instructions will be sent upon request.

(See Pyramid Pages in Sweets)

PYRAMID METALS COMPANY 457 North Oakley Boulevard, Chicago, Illinois

### BOOKS

(Continued from page 51)

#### BUILDING TYPES

THE 1936 BOOK OF SMALL HOUSES, by the Editors of The Architectural Forum. Simon & Schuster, Inc., New York, 253 pp., illustrated, 12 x 9, \$1.96.

A guide book for prospective home builders telling how to select an architect, how to choose a plan and design, and how to build and finance. The book contains plans, photographs, specifications, interiors, and actual costs of 115 houses ranging from \$982 to \$20,000.

THE ENGLISH COUNTRY HOUSE, by Ralph Dutton. Charles Scribner's Sons, New York. 120 pp., illustrated. 83/4 x 53/4. \$2.75.

The subject is treated chronologically and interest is given the book by the inclusion of considerable historical data and an excellent picture of the social background in each period.

HOUSES FOR MODERATE MEANS, by R. Randal Phillips. Charles Scribner's Sons, New York. 112 pp., illustrated. 73/4 x 93/4. \$2.75.

A collection of more than 70 modern English houses, with plans, photographs, and text.

TEATRI, by Bruno Moretti. Ulrico Hoepli Editore, Milan. 142 pp., illustrated. 11 x 9. Lire 80.

The latest of a series of volumes on modern building types. While much of the material has appeared in periodicals and books, the collection is of considerable interest as it includes most of the noteworthy theaters constructed in the past twenty years. It is profusely illustrated and contains sections as well as plans.

DAS JAPANISCHE WOHNHAUS, by Tetsuro Yoshida. Verlag Ernst Wasmuth, Berlin. 193 pp., about 200 illustrations. 9 x 103/4. RM 16.

An exhaustive study of the Japanese house. Its historical evolution, materials, construction, landscaping, ventilation, heating, plumbing, and decoration are thoroughly gone into.

INDUSTRIAL ARCHITECTURE. Edited by C. G. Holme, introduction by L. H. Bucknell. The Studio Publications, Inc., New York. 208 pp., illustrated. 9 x 11½. \$10.00.

A collection of factories, warehouses, power plants, tunnel works, garages, research stations, markets, railway buildings, etc., which represent the most vital architecture being produced in the world today.

#### LANDSCAPE ARCHITECTURE

GARDENS AND GARDENING, 1936. Edited by F. A. Mercer. The Studio Publications Inc., New York. \$4.50.

An annual issue of a publication which has come to be recognized as an important element in contemporary garden literature.

(Continued on page 142)



# FROM ROOF TO BASEMENT

B<sup>EGINNING</sup> with a single drain, furnished then in one size only, and first marketed in 1914, the short span of 22 years has seen Josam Products grow to a list of hundreds.

During all these years Josam has been installed in the finest structures. From the experience gained during these years and with the cooperation of architects and engineers, the Josam organization anticipates the requirements of the times. Thus Josam offers you sanitary plumbing specialties of the highest type. Every product is animated by the Josam spirit of making yesterday's experience put perfection into Josam products of tomorrow—and today. Sound practice suggests your continued installation of Josam Products.



ASK FOR INFORMATION ON THE LATEST JOSAM DEVELOPMENTS—In keeping with its plan of constant improvement Josam continually offers new specialties. The

latest are described in recent bulletins which we will gladly send on request.

If you do not have the 104 page Josam catalog H, a copy will be included.

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Floor— Roof— Urinal— Shower— Garage— Non-clog—Triple Drainage— DRAINS and TRAPS

ADJUSTABLE OUTLET CONNECTIONS for floor and wall-hung closets

INTERCEPTORS for Grease—Oil

—Plaster—Dental and Surgical

—Sediment and Hair

SHOCK ABSORBERS to dispel water hammer

SWIMMING POOL Drains, Hair Interceptors and Circulating Connections

Open-Seat Back-Water SEWER VALVES

VENT STACK SLEEVES

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#### What Is Behind Its Beautiful Exterior?

Metallation\* and \*Ecod Fabric help you meet the demands of todays buyers for homes that have real value behind their beautiful exteriors. Metallation provides efficient year round insulation; Ecod assures sturdy walls and ceilings, and their cost is so low that every home you plan can afford them.

#### METALLATION

Metallatian, properly applied, reflects appoximately 95% of all radiant heat that strikes its metal surface. Its efficiency is not impaired by moisture absorbtion. Metallation throws little stored heat into the rooms after sundown in summer; it absorbs little costly room heat in winter. It costs less than any insulation of comparable efficiency and is easily applied in new or existing buildings.

#### **ECOD FABRIC**

Ecod Fabric, is reinforced with steel wires welded to steel ribs. Embedded in the plaster slab, it provides a base for walls, ceilings and exterior finishes. It creates smooth surfaces for plastering—it minimizes cracks, reducing repair and decorating upkeep. Ecod is approved by National Fire Underwriters, Building Boards, and noted architects and engineers. Metallated \*Ecod adds effective insulation without application cost for the insulation.

Write for catalog describing these modern Reynolds Specification building products. \*Trade Mark Reg. U. S. Pat. Off.

THE HOME SHOWN ABOVE WAS BUILT IN READING, PA., AND DESIGNED BY ALOIS MAYER, ARCHITECT. IT IS INSULATED WITH METALLATION AND LATHED THROUGHOUT WITH ECOD FABRIC.

# "The Home With The Silver Lining" REYNOLDS CORPORATION 19 RECTOR STREET, NEW YORK

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Reynolds Air Conditioning, Metalumber (fireproof, termite proof framing and joists), Metallation (reflective type insulation), Ecod Fabric (reinforced base for plaster and brick veneer), Reynolds Specification Paints, Liquid Metallation (aluminum paint), Steel Windows.

### **BOOKS**

(Continued from page 140)

#### HISTORY AND BIOGRAPHY

MY LIFE IN ARCHITECTURE, by Ralph Adams Cram. Little, Brown & Co., Boston. 325 pp., 29 illustrations.  $6\frac{1}{2} \times 9\frac{1}{2}$ . \$3.50.

The record of a period of profound and disturbing change in American architecture and its effect on a man of broad culture.

WILLIAM MORRIS, DESIGNER, by Gerald H. Crow. The Studio Publications, Inc., New York. 129 pp., 72 illustrations, with four in color.  $8\frac{1}{4} \times 11\frac{1}{2}$ . Paper \$3.50, cloth \$4.50.

A biography of a man who tried vainly to avoid the evils of rising industrialization by a revival of handicrafts.

THE ARCHITECTURE OF H. H. RICHARDSON AND HIS TIMES, by Henry Russell Hitchcock, Jr. The Museum of Modern Art, New York. 311 pp., 145 illustrations,  $7\frac{1}{2} \times 10$ . \$6.00.

A biography of a man who was admittedly the outstanding architect of his day.

LOUIS SULLIVAN, PROPHET OF MODERN ARCHITECTURE, by Hugh Morrison. The Museum of Modern Art, New York; W. W. Norton & Co., Inc., New York. 391 pp., illustrated. \$4.00.

A complete story of Sullivan's career as an architectural pioneer.

#### INTERIOR DECORATION

COLOUR DESIGNS FOR MODERN INTERIORS. The Architectural Press, Ltd., London; Julius Hoffmann, Stuttgart. 80 plates in full color. 9½ x 11¾. 42s. Eighty beautifully reproduced plates showing some of the trends in modern interiors.

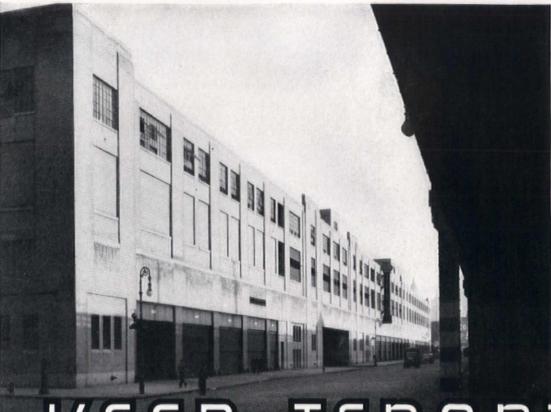
DECORATIVE ART 1936. Edited by C. G. Holme. The Studio Publications, Inc., New York. 140 pp., illustrated with photographs, six color plates. 8½ x 11½. Paper \$3.50, cloth \$4.50.

The latest issue of this well-known year book, devoted to the modern house, its furniture, and accessories.

### HOUSING AND CITY AND REGIONAL PLANNING

CITY PLANNING AND HOUSING: HISTORI-CAL AND SOCIOLOGICAL, by Werner Hegemann. The Architectural Book Publishing Co., Inc., New York. 257 pp., 61/4 x 91/4. \$3.75.

A unique addition to the vast amount of housing literature; a book which deserves to be widely read (Continued on page 144)



F. C. Linde Company Building, New York City. Temperature Automatically controlled by the Weatherstat system including automatically lowered night temperature and morning pickup.

# KEEP TENANTS

# Satisfied at LOWEST COST with AUTOMATIC CONTROL

MINNEAPOLIS-HONEYWELL automatic temperature control system will keep tenants satisfied and at the same time will operate your heating system on the most economical basis, often producing sufficient fuel saving to pay the cost of the control installation in a single heating season. No matter what type of building you are planning or operating there is a Minneapolis-Honeywell control system to meet its specific requirements. The Minneapolis-Honeywell Engineer in or near your city is available for consultation with you, your architect or your engineer. He can quickly show you the possibilities for improving your heating facilities and saving fuel while doing so. Minneapolis-Honeywell Regulator Company, 2740 Fourth Avenue South, Minneapolis, Minnesota. Branch and distributing offices in all principal cities.

In Canada: Minneapolis-Honeywell Regulator Company, Ltd., 117
Peter St., Toronto. European Sales and Services: N. V. Nederlandsche
Minneapolis-Honeywell, Wijdesteeg 4, Amsterdam – C, Holland.



#### THE WEATHERSTAT

The only outside control that responds to all four weather factors Outside Temperature, Solar Radiation, Wind Direction, and Wind Velocity.

### MINNEAPOLIS-HONEYWELL

Control Systems

BROWN INDUSTRIAL INSTRUMENTS FOR INDICATING, RECORDING AND CONTROLLING

### **BOOKS**

(Continued from page 142)

for its revelation of the extent to which our housing and real estate practice have departed from the earliest American traditions of government.

TOWN PLANNING AND HOUSING THROUGH-OUT THE WORLD. Edited by Bruno Schwan for the Institute for Building Research of German Ministry of Labor. Ernst Wasmuth, Berlin. 438 pp., illustrated. \$12.00.

A summary of the present status of town planning and housing in 34 countries. Authoritative reports from each country have been assembled by the editor, each report appears in English, French, and German.

EQUIPMENT AND FITTINGS FOR SMALL DWELLINGS. The International Housing Association. Julius Hoffmann, Verlag, Stuttgart. Two volumes. 243 pp., 9 x 1134. Printed in 1 volume 18M, printed in 2 volumes 14M for the set.

An attempt to organize all available information on construction, equipment, and fittings used in housing projects in Europe and the U. S., with the purpose of making available to planners accurate information on innovations tried in new projects.

HOUSING PROGRAM FOR THE UNITED STATES. Public Administration Service, Chicago. 42 pp. 93/4 x 113/4. Paper, 50 cents.

A report prepared for the National Association of Housing Officials.

STATE PLANNING: Review of Activities and Progress. National Resources Board, U. S. Government Printing Office, Washington, D. C. 75 cents.

A report briefly summarizing the work of the 46 State boards for 1935. It represents the first national recognition of the need for planning and the first national effort to integrate such work.

SLUM CLEARANCE AND RECONDITIONING OF INSANITARY DWELLINGS: International Housing Association. Julius Hoffmann, Stuttgart. One volume text, one volume plates. 289 pp. 9 x 113/4. Printed in one volume 20M, printed in 2 volumes 16M for the set.

A collection of data on slum clearance projects throughout the world, with descriptions of the methods adopted in each case, legal restrictions, and extent of the work.

SLUMS AND HOUSING, by James Ford with the collaboration of Katherine Morrow and George N. Thompson. Harvard University Press, Cambridge. Two volumes. 1,033 pp.  $10\frac{1}{2} \times 7\frac{1}{2}$ . \$10.00.

A monumental study dealing primarily with New York's housing problem and its history, with an exhaustive treatment of the slum, its exact definition, causes, social and economic consequences, and physical characteristics. It reviews almost every type of housing endeavor, including the European projects.

(Continued on page 148)



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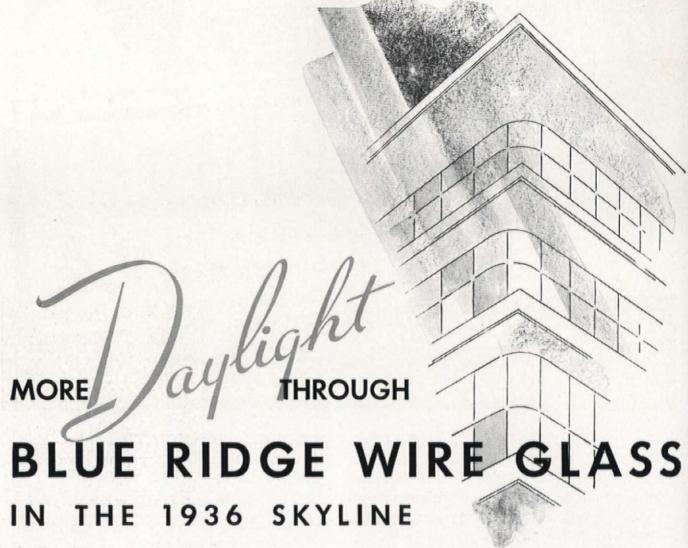
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This issue of The FORUM gives the building industry the first scientifically accurate, factual information ever available on what the house-buying public really wants. Thus, for the first time it is possible to present ever available on what the house-buying public really wants, vitus, for the first time it is possible to present 50 case studies of houses selected because they clearly reflect known specifications of the buying market.

Cooperating with the Niagara Hudson Power Corporation, The FORUM's editors prepared 60 questions designed to find out exactly what kind of house the public is looking for. The Niagara Hudson Power Corporation sent these 60 questions by special messenger to 250,000 of its customers. The tabulated returns are presented in this November FORUM—the most complete data that has ever been assembled as to just what presented in this November 1 Ortom—the most complete data that has ever been assembled as to just what people want in a house . . . In a \$5,000 house . . . In houses costing more than \$5,000 but less than \$10,000 people want in a nouse . . . in a \$5,000 house . . . in houses costing more than \$5,000 but less than \$10,000 . . . In houses for small families and for large families . . . A cross section of taste in styles of architecture . . . Room arrangement . . . Heating plants and every other detail . . . Not theory, not hunch, but hard facts.

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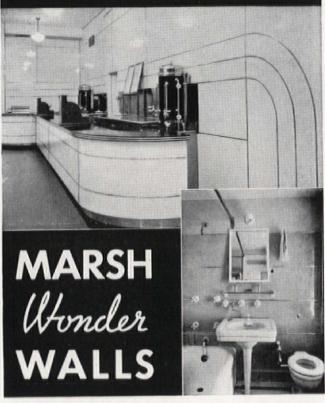
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### **BOOKS**

(Continued from page 144)

SUBSISTENCE HOMESTEADS, edited by the International Housing Association. Julius Hoffmann, Verlag, Stuttgart. 112 pp., illustrated with drawings, maps and photographs. 8½ x 11¾. Pamphlet binding. RM6.

Answering a specific questionnaire, authorities in various countries have summed up their theories and actions in connection with land settlement.

BIBLIOGRAPHY OF PLANNING, 1928-1935, by Katherine McNamara. Vol. X, Harvard City Planning Studies. Harvard University Press, Cambridge. 232 pp., 7 x 10. \$3.50.

A supplement to the Manual of Planning Information which was published in 1928. Lists of general books, planning board reports, organizations and periodicals, literature on foreign work, all arranged for convenient use.

AMERICAN PLANNING AND CIVIC ANNUAL. Edited by Harlean James. American Planning & Civic Association, Washington, D. C. 356 pp., illustrated. 7¾ x 9¾. \$3.00; to members \$2.00.

A record of recent civic advance including the proceedings of the Conference on City, Regional, State, and National Planning held at Cincinnati, May 1935. Also addresses selected from the National Conference on State Parks held at Skyland, Va. June 1935.

#### TECHNICAL

MECHANICAL AND ELECTRICAL EQUIPMENT FOR BUILDINGS, by Charles Merrick Gay and Charles De Van Fawcett. John Wiley & Sons, Inc., New York. 429 pp., illustrated. 6 x 9. \$5.00.

A textbook presenting the essentials of mechanical and electrical equipment for buildings, describing the fundamental theories involved and their application. It has been prepared for use in architectural and technical schools, in the everyday practice of architecture, and in preparation for civil service and state license examinations.

CIVIL ENGINEERING HANDBOOK, Leonard Church Urquhart, Editor-in-chief. McGraw-Hill Book Company, Inc., New York. 885 pp., illustrated. 61/4 x 91/4. \$5.00.

A compact treatise covering the entire field, for use as a reference or textbook. Of particular value to the architect are the chapters on steel and concrete design, foundations, and stresses in framed buildings.

CHECK LIST OF CONSTRUCTION, CONSTRUCTION MATERIALS AND EQUIPMENT, by George W. Spaulding, Denver. 10½ x 6¾. \$7.00.

A condensed, quick reference of the construction industry in one volume indexed for convenient use, list-(Continued on page 152) "Now I Know what **Exide Emergency** Lighting can mean"

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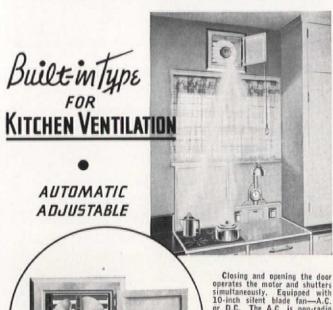
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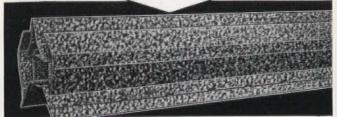
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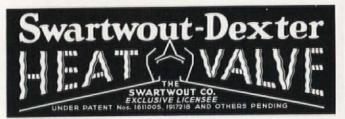
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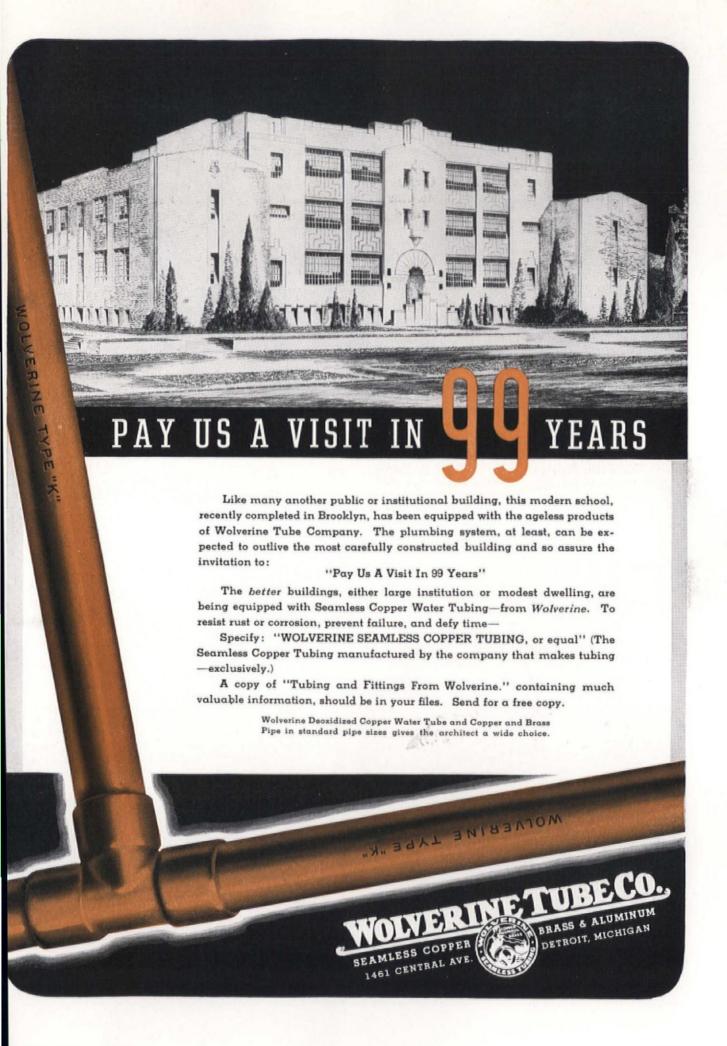
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### BOOKS

(Continued from page 148)

ing standard materials, equipment, and accessories under various headings; the selection of materials, however, is left to the reader's judgment.

AIR CONDITIONING—DESIGN AND CONSTRUC-TION OF DUCTS, by Thomas J. Brett. American Technical Society, Chicago. 232 pp., illustrated. 73/4 x 93/4. \$2.50.

A practical text on the requirements, design, construction, installation and operation of air ducts for distribution of air for air conditioning systems installed in various types of buildings and railway cars.

ARCHITECTURE LUMINOSE, by G. Canesi and A. Cassi Ramelli. Ulrico Hoepli, Milan. 162 pp., 216 illustrations. 9 x 11. Lire 80.

A stimulating collection of photographs which show architectural lighting in its most imaginative and varied forms. Three general classifications: Exterior illumination, interior lighting, and fixtures.

ARCHITECTURAL DRAWING AND DETAILING, by J. Ralph Dalzell and James McKinney. American Technical Society, Chicago. 212 pp., numerous illustrations, 6 x 81/2, \$2.00.

A treatise for the beginner presenting the accepted techniques of architectural drawing, showing the most commonly used symbols, and explaining the procedures involved in the preparation of working draw-

ARCHITECTURAL GRAPHIC STANDARDS, by Ramsey and Sleeper. John Wiley & Sons, New York. Second edition. 284 pp. 9½ x 11¾. \$6.00.

A revised and enlarged edition of this invaluable office manual. The introduction of about 50 new plates covers new materials and practices that have appeared in the past three years.

COLOR IN SKETCHING AND RENDERING, by Arthur L. Guptill. Reinhold Publishing Corporation, New York. 348 pp., numerous illustrations in color and black and white. 91/4 x 113/4. \$10.00.

A practical treatise on the uses of color in pigment form, with particular emphasis on watercolor.

ARCHITECTS' SPECIFICATIONS — HOW TO WRITE THEM, by Goldwin Goldsmith. John Wiley & Sons, Inc. 128 pp. 83/4 x 111/4. \$2.50.

The title is self-explanatory. An excellent book.

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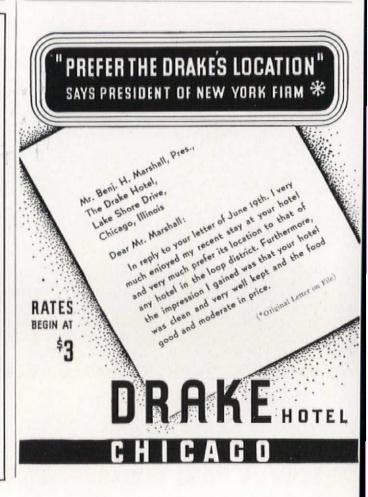
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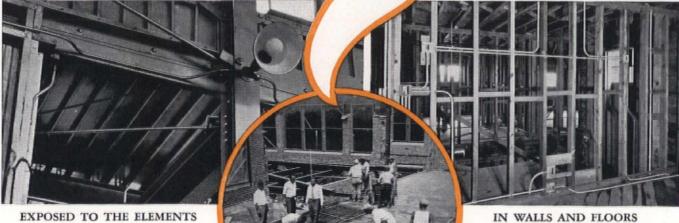
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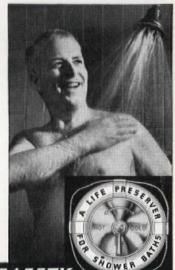


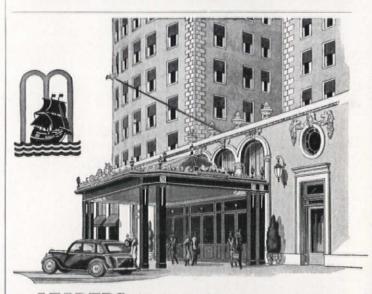
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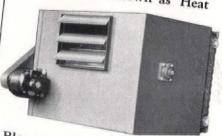
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Residence at Syracuse, New York, designed by Dwight James Baum, Architect, Riverdale-on-Hudson, New York City, showing use of Anaconda Economy Copper Roofing.

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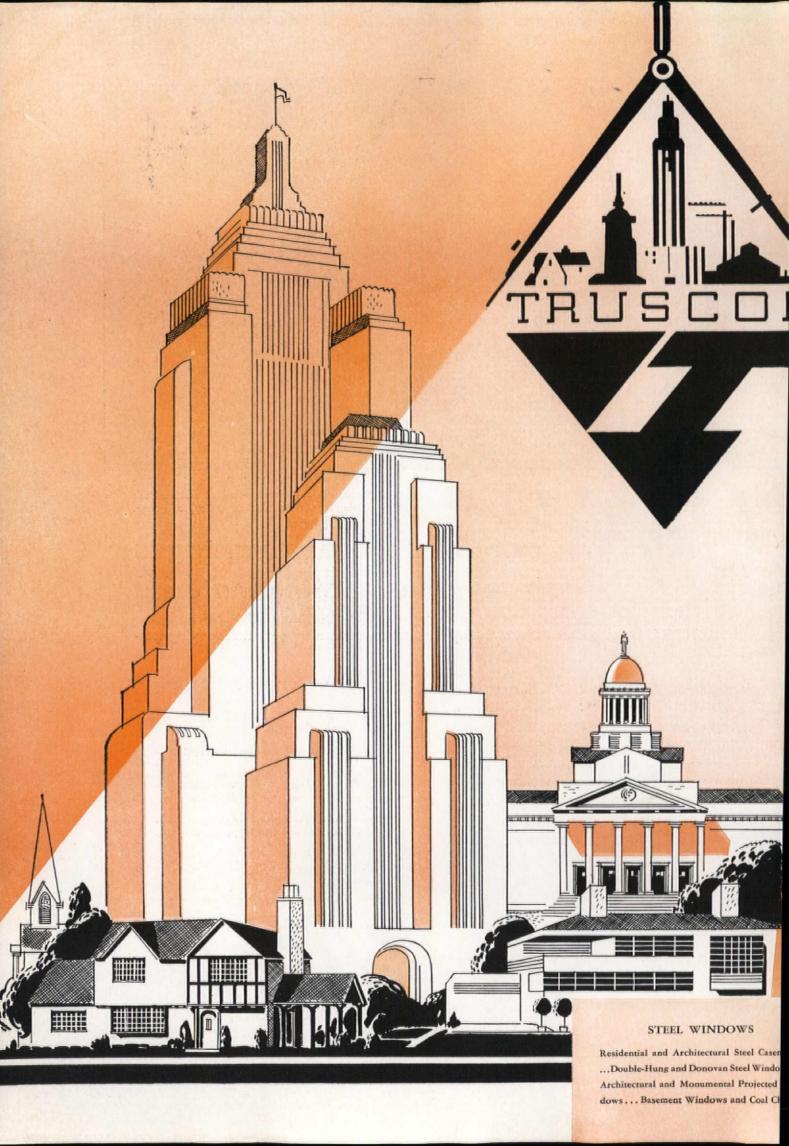
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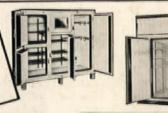


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